

## Abstract:

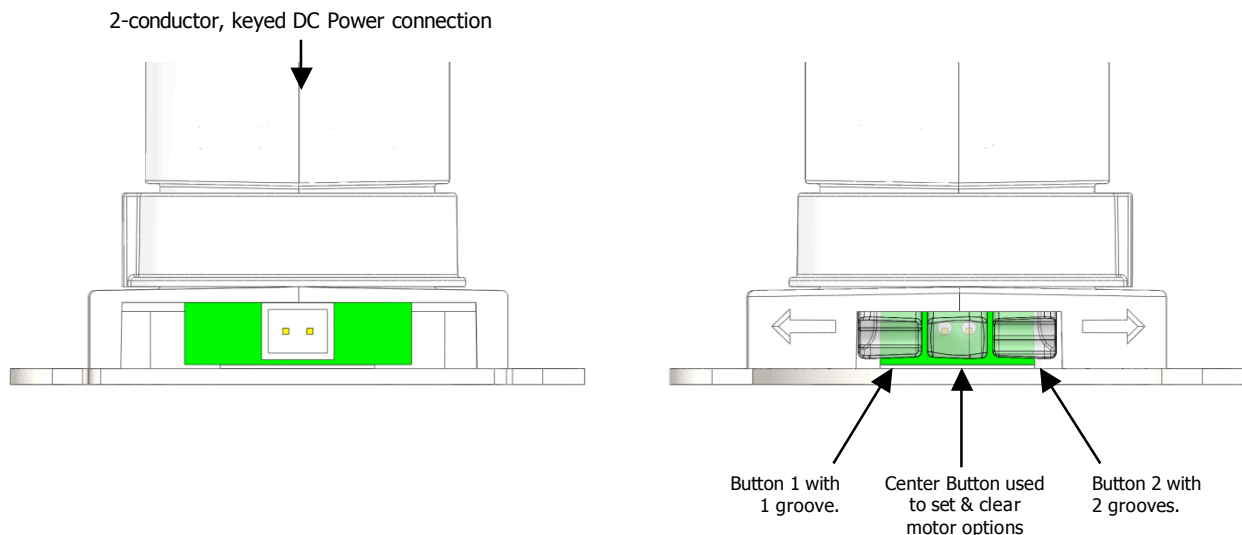
This document covers how to properly set the motor limits (end positions) on an M25S series motor. Refer to M25S Specifications document for technical details.

## Products Included:

M25S motor

## Things to know before you start:

- This motor will not report its version on power up. See **Determining Motor Version** below.
- Be sure the motor is connected to continuous 12V DC power.
- An M25S motor will ship from the factory without limits set.
- The M25S motor will have a 2-conductor, keyed DC power plug in the motor head for connecting the DC Power Cord (PC M25). The Power Cord is included with each M25S motor.
- The M25S motor has three buttons on the head of the motor. Each button has an LED that will flash messages:
  1. Button 1, **RED** LED button, with one groove, always operates the motor in the direction indicated by the arrow on the head.
  2. Button 2, **GREEN** LED button, with two grooves, always operates the motor in the direction indicated by the arrow on the head.
  3. Center Button, **YELLOW** LED button with no groove is used to set and clear motor options.
- Any directional button press will move the motor. This is a momentary button action, releasing the button results in stop.



## Powering up M25S:

Connect the DC Power Cord to a 12VDC power supply. Insert into the 2-conductor plug on the end of M25S. You are now ready to set the travel limits.

## Motor Configuration:

- **Setting motor limits:** When Power is first applied to the motor (factory default) the red LED will flash. The flashing **RED** LED on Button 1 indicated that the limit is not set. To set it:
  1. Operate the motor to the desired position by pressing either Button 1 or Button 2.
  2. Once the desired position has been reached, setting the limit requires a two button press. Press & hold the Center Button and the Button 1 (flashing **RED**) until the **RED** LED turns off and the **YELLOW** LED lights solid (after approx. a 2 second hold) then immediately release both buttons to set the RED Button limit.

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3. The **YELLOW** LED light flashes solid quickly to acknowledge the "Position is set to here". The motor immediately goes into "Set GREEN limit mode". The **GREEN** LED on Button 2 will start to flash.
4. Press either Button 1 or Button 2, to operate the motor to the desired position.
5. Once the desired position has been reached, setting the limit requires a two button press. Press & hold the Center Button and the Button 2 (flashing GREEN) until the GREEN LED turns off and the **YELLOW** LED lights solid (after approx. a 2 second hold) then immediately release both buttons to set the GREEN Button limit.

- **Clear Limits:**

1. Press & hold the Center Button, until the **YELLOW** LED lights solid (after approx. 10 seconds) then release the Center Button.
2. The LED in Button 1 will be flashing **RED**, indicating motor has cleared its limits.

- **Clear a single Limit - BUTTON 1 (RED LED):**

1. This is a two button press: Press & hold the Center Button and Button 1, the YELLOW LED will light solid – continue to press! Aprox. 4 seconds later, the YELLOW LED will go out, release now. In about 1 second the RED LED will come on, indicating that the limit is clear.
2. The RED LED in Button 1 will be flashing **RED**. Re-position the motor and re-set the limit.

- **Clear a single Limit - BUTTON 2 (GREEN LED):**

1. This is a two button press: Press & hold the Center Button and Button 2, the YELLOW LED will light solid – continue to press! Aprox. 4 seconds later, the YELLOW LED will go out, release now. In about 1 second the GREEN LED will come on, indicating that the limit is clear.
2. The GREEN LED in Button 2 will be flashing GREEN. Re-position the motor and re-set the limit.

- **Toggle motor direction: NOTE: you must have a DPDT DC switch in line to see the result of this action.**

1. Simultaneously press & hold both Button 1 and Button 2, until both the **RED** and **GREEN** LEDs light (after approx. 5 seconds) then release both buttons.
2. If motor direction is such that open polarity is CW, then the LEDs will blink **RED** then **GREEN**. If motor direction is such that open polarity is CCW, then the LEDs will blink **GREEN** then **RED**.

- **Adjusting RPM:**

\*NOTE: Using 34 RPM decreases the stated torque\*

1. Press & hold the Center Button, until the **YELLOW** LED lights solid (after approx. 10 seconds) AND
  - i. For 34 RPM: add press & hold of Button 2 until **YELLOW** LED extinguishes (continuing holding) and the GREEN LED comes on for 3 seconds, indicating 34 RPM.
  - ii. For 28 RPM: add press & hold of Button 1 until **YELLOW** LED extinguishes and the RED LED comes on for 3 seconds, indicating 28 RPM.
2. You must re-set motor limits. NOTE: RED LED is now flashing.

- **Determining Motor Version:**

\*NOTE: both motor limits must be set to determine version\*

1. Press & hold the Center Button until **RED** and/or **GREEN** LED blinks occur (after approx. 3 seconds), then release the Center Button.
2. For this version, v1.6, running at 28rpm the LED sequence will be **RED** then **GREEN** then **RED**.
3. For this version, v1.6, running at 34rpm the LED sequence will be **RED** then **GREEN** then **GREEN**.