

Abstract:

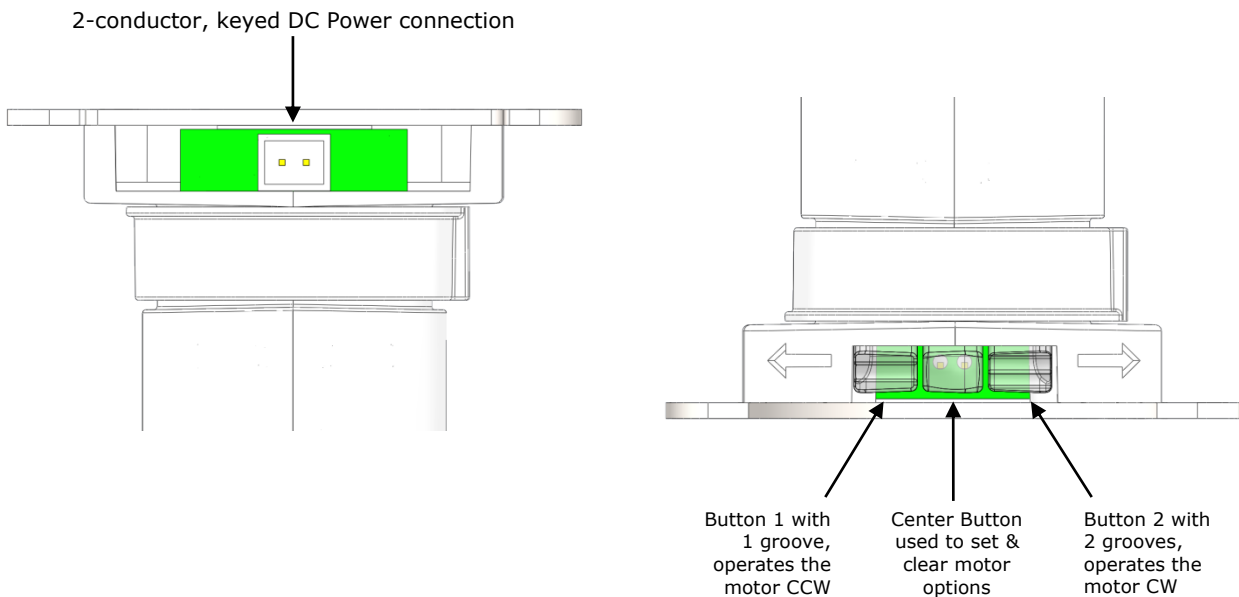
This document covers how to properly set the motor limits (end positions) on an M25S series motor. Refer to M25S Specifications document for technical details.

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.
- CW is clockwise rotation looking at the motor from the head end, CCW is counter-clockwise.
- Be sure the motor is connected to continuous DC power.
- An M25S series motor will ship from the factory without limit settings.
- The M25S series motors have a 2-conductor, keyed DC power plug in the motor head for connecting the included DC Power Cord, PC M25.
- The M25S series motors have three buttons with internal LEDs:
 1. Button 1, **RED** LED button, with one groove, always operates the motor counterclockwise [CCW].
 2. Button 2, **GREEN** LED button, with two grooves, always operates the motor clockwise [CW].
 3. Center Button, **YELLOW** LED button with no groove is used to set and clear motor options.
- If any button is pressed while the motor is moving, the motor will stop.



Powering up M25S:

The M25S series motor includes a keyed 2-conductor DC power plug in the head end of the motor. Securely connect the included DC Power Cord (PC M25) to this plug.

Motor Configuration:

• Setting motor limits:

When power is first applied to the motor from the factory it is in "Set CCW limit mode." This mode is identified by a flashing **RED** LED on Button 1.

1. Press either Button 1 (CCW motion) or Button 2 (CW motion), to operate the motor to the desired CCW limit.
2. Once the desired CCW limit position has been reached, press & hold the Center Button first and then also press & hold Button 1 (flashing **RED**) until the **RED** LED turns off and the **YELLOW** LED lights solid (after approx. 2 seconds) then immediately release both buttons to set the CCW limit.

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3. The **YELLOW** LED lights solid for three seconds to acknowledge the "Set CCW limit to here" operation, and then the motor goes into "Set CW limit mode" and the **GREEN** LED on Button 2 will be flashing.
 4. Press either Button 1 or Button 2, to operate the motor to the desired CW limit.
 5. Once the desired CW limit position has been reached, press & hold the Center Button first and then also press & hold Button 2 (flashing **GREEN**) until the **GREEN** LED turns off and the **YELLOW** LED lights solid (after approx. 2 seconds) then immediately release both buttons to set the CW limit.
 6. The **YELLOW** LED lights solid for three seconds and then extinguishes, to acknowledge the "Set CW limit to here" operation.
 7. Both motor limits are set and all LEDs are extinguished.
- **Clear both limits:**
 1. Press & hold the Center Button, ignoring any **RED** or **GREEN** LED blinks, 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**, see "Setting Motor Limits" above.
 - **Clear CCW motor limit:**
 1. Press & hold the Center Button first and then also press & hold Button 1 until the **YELLOW** LED lights (after approx. 2 seconds) and then extinguishes (approx. 3 seconds later) then release both buttons.
 2. The LED in Button 1 will be flashing **RED**, see "Setting Motor Limits" above.
 - **Clear CW motor limit:**
 1. Press & hold the Center Button first and then also press & hold Button 2 until the **YELLOW** LED lights (after approx. 2 seconds) and then extinguishes (approx. 3 seconds later) then release both buttons.
 2. The LED in Button 2 will be flashing **GREEN**, see "Setting Motor Limits" above.
 - **Adjusting either motor limit:**
 1. Press either Button 1 (CCW motion) or Button 2 (CW motion), to operate the motor to the desired position.
 2. Once the desired limit position has been reached, press & hold the Center Button first and then also press & hold the appropriate button, Button 1 (CCW limit) or Button 2 (CW limit), until the **YELLOW** LED lights (after approx. 2 seconds) then immediately release both buttons to set the corresponding motor limit.
 - **Toggle motor direction:**
 1. Simultaneously press & hold both Button 1 (CCW) and Button 2 (CW), 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: Increasing the M25S RPM (speed) decreases the stated torque

 1. Press & hold the Center Button, ignoring any **RED** or **GREEN** LED blinks, until the **YELLOW** LED lights solid (after approx. 10 seconds).
 2. While continuing to press & hold the Center Button also press & hold Button 2 for "high speed" (34rpm) – **OR** – also press & hold Button 1 for "standard speed" (28rpm).
 3. The **YELLOW** LED extinguishes and then to denote the current RPM setting the **RED** LED lights solid (approx. 3 seconds) indicating "high speed" **OR** the **GREEN** LED lights solid (approx. 3 seconds) indicating "standard speed".
 4. The motor limits have been cleared as a result of adjusting the RPM identified by a flashing **RED** LED on Button 1. See "Setting Motor Limits" above.
 - **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**.