

Summary:

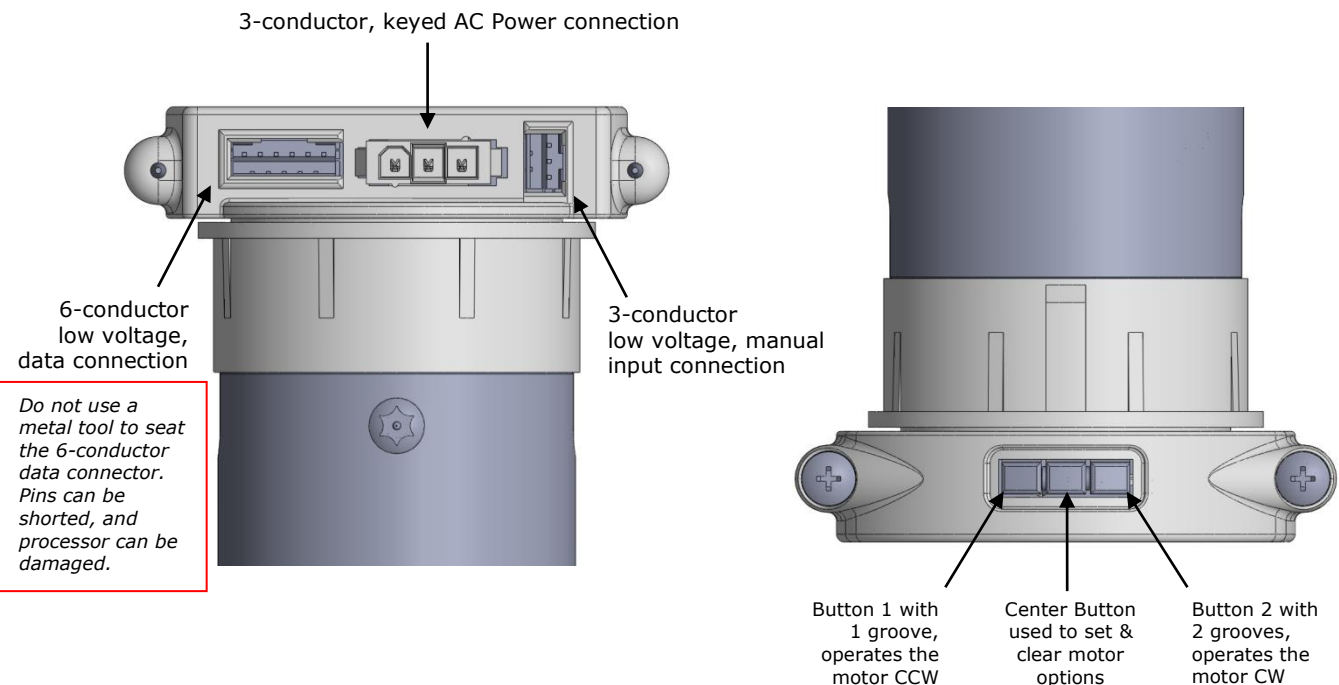
This document covers how to properly set the motor limits (end positions) and also how to connect one or both low voltage data cables to an M50Q series motor. Refer to M50Q Series 230VAC Specifications document for technical details.

Products Included:

M50Q 230VAC SERIES MOTORS: M50Q 326B, M50Q 626B, M50Q 1530B

Things to know before you start:

- On power-up, LEDs will blink **GREEN** then **GREEN** indicating version P5.
- CW is clockwise rotation looking at the motor from the head end, CCW is counter-clockwise.
- Be sure the motor is connected to continuous AC power.
- An M50Q series motor will ship from the factory without limit settings and each one has a randomized RQ address between C00 and ZZZ.
- The M50Q series motors have a 3-conductor, keyed AC power plug in the motor head for connecting the included AC Power Cord, PC M40/50 UNIV.
- The M50Q series motors have a 6-conductor, keyed low voltage, data connection (RQ Bus and RP Bus) for use with CBL 6FT QE QM, CBL 1FT QE QM or RE 1 FT QM, each sold separately. This cable must be connected after power connector.
- The M50Q series motors have a 3-conductor, keyed low voltage, manual input (dry contact) connection for use with CBL 6FT DM, sold separately. This cable must be connected after power connector.
- The M50Q series motors have three clear 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.
- Utilize an **SP1E3Q** when connecting more than two RQ enabled motors (M50Q, M40Q or M25Q).
- Refer to the **RQ Motor Sample Connection Diagram** on page 4 for an example wiring schema.



ESI M50Q 230VAC Series Motor P5

Quick Setup Guide

Powering up M50Q:

The M50Q series motor includes a keyed 3-conductor AC power jack in the head end of the motor. Securely connect the included AC Power Cord (PC M40/50 UNIV) to this jack. Installer shall connect appropriate AC power plug to blunt-cut end.

** NOTE: M50Q part numbers ending with 'A' are 115VAC and those ending with 'B' are 230VAC.

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 (approx. 2 seconds) then immediately release both buttons to set the CCW limit.
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 (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 LED's are extinguished.

- **Clear both limits:**

1. Press & hold the Center Button until the **YELLOW** LED lights solid (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 (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.

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- Clear CW motor limit:
 1. Press & hold the Center Button first and then also press & hold Button 2 until the **YELLOW** LED lights (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 (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 (approx. 5 seconds) then release both buttons.
 2. If motor direction is such that open command is CW, then the LEDs will blink **RED** then **GREEN**. If motor direction is such that open command is CCW, then the LEDs will blink **GREEN** then **RED**.
- Determining Motor Version:
 1. Power cycle the motor to determine motor firmware version.
 2. On power-up, LEDs will blink **GREEN** then **GREEN** indicating version P5.

Low voltage cable connections:

**** NOTE: The Low-Voltage cable connections must be made after the keyed AC power connection is in place. ****

- Manual inputs (dry contact) using 3-conductor, keyed low voltage cable:

If you plan to use relays from a building automation system, a Single Pole Double Throw (SPDT) manual input (dry contact) switch, or similar device for "contact closure control" of an M50, you will need to connect CBL 6FT DM, sold separately.

 1. Connect CBL 6FT DM to the 3-conductor, keyed low voltage, manual input (dry contact) connection, and wire it to the contact closure control – center wire is COMMON. **When inserting the connector into the motor, do not use a metal tool to push the connector into the socket.**
 2. Verify desired operation from the contact closure device.

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- RQ Bus / RP Bus using 6-conductor, keyed low voltage cable:

If you plan to utilize an RQ Bridge, Infrared Eye, or other RP/RQ accessory to control an M50, you will need to connect CBL 6FT QE QM, or CBL 1FT QE QM, sold separately.

 1. Connect the cable to the 6-conductor, keyed low voltage, data connection, and connect the mod plug into an RP or RQ bus. **When inserting the connector into the motor, do not use a metal tool to push the connector into the socket.** Note that this plug is an EYE as far as RP Bus connection is concerned.
 2. Verify desired functions from RQ or RP input device or accessory.

** DO NOT attempt to send RS232, RS422 or contact closure to this connection. **

If you plan to use an Infrared Eye to control an M50, you may connect RE 1 FT QM, sold separately.

1. Connect the eye to the 6-conductor, keyed low voltage, data connection. **When inserting the connector into the motor, do not use a metal tool to push the connector into the socket.**
2. Verify desired operation from the IR control.

M40Q and M50Q Typical Wiring Diagram

