EAPC RETROFIT

Field Assembly Instructions

PURPOSE	Installation of the EAPC Position Controller into an existing Hamar electric actuator.

IMPORTANT	Installation should be completed by qualified personnel. Follow all applicable electrical safety procedures, including **Lockout/Tagout (LOTO)**, before working inside the actuator. Fully read the retrofit instructions prior to beginning the retrofit process. Failure to adhere to these steps could result in damaging the EAPC or actuator, or result in personal injury.

PREPARE THE ACTUATOR

Place the actuator in the **fully retracted position**.

Disconnect power to the actuator.

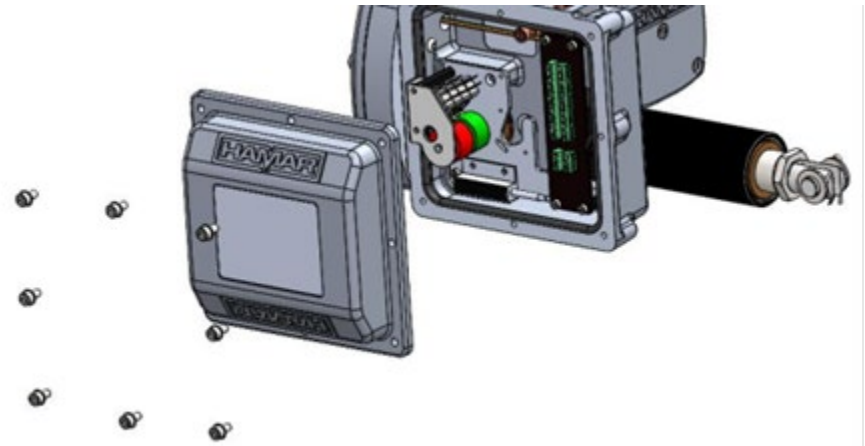
Apply the appropriate **Lockout/Tagout (LOTO)** procedure.

Verify that power has been removed before opening the actuator limit switch housing.

OPEN THE LIMIT SWITCH HOUSING

Remove the fasteners securing the **limit switch housing cover**.

Remove/open the limit switch housing cover to access the internal components.



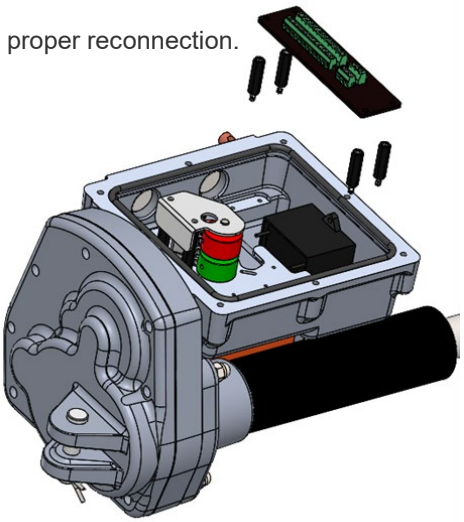
REMOVE THE EXISTING TERMINAL STRIP

Disconnect the existing wires from the terminal strip.

- It is recommended to record the position of and label the wires to ensure proper reconnection.

Remove the following:

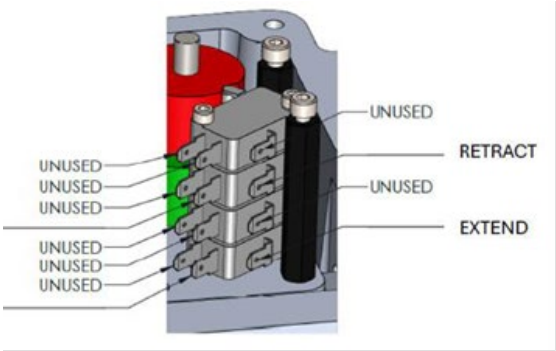
- Terminal strip
- Terminal strip mounting fasteners
- Terminal strip standoffs



PREPARE THE LIMIT SWITCH CONNECTIONS

Locate the quick-connect wires attached to the limit switches. Remove the wires labelled “unused” in the below diagram.

Install the supplied protective caps onto the now-unused limit switch connections.



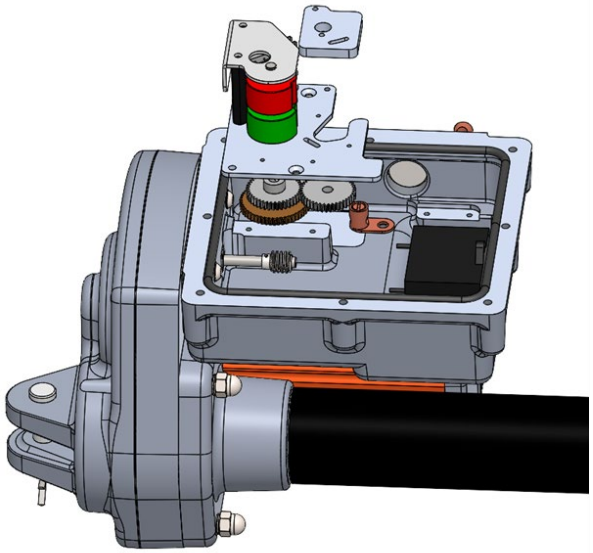
INSTALL THE POTENTIOMETER - AS REQUIRED

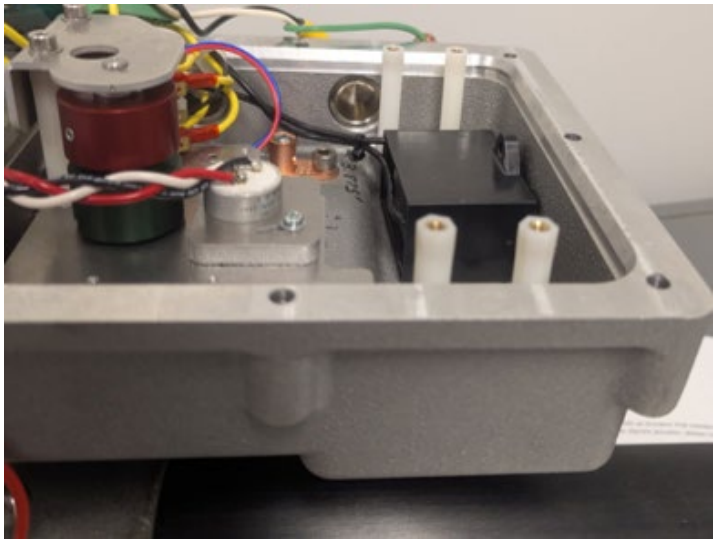
Remove the fasteners securing the limit switch mounting plate to the limit switch housing.

Install the following components from the retrofit kit:

- Potentiometer-delivered pre-mounted to the potentiometer mounting plate and pre-soldered wires
- Potentiometer mounting plate
- Two potentiometer drive gears
- Four longer standoffs (thread locking compound recommended)

Orient the potentiometer mount and drive gears as shown in the installation diagram and reinstall and secure the limit switch mounting plate. Note: if the retrofit kit for the configuration you ordered includes two different sized potentiometer drive gears, the larger of the two will be affixed to the limit switch cam shaft.





Loosen the fasteners securing the potentiometer mounting plate enough to allow the plate to pivot slightly.

Using an ohmmeter or multimeter, measure resistance across the red and black pre-soldered potentiometer wires (R2/R3).

Rotate the potentiometer gear until the meter reads approximately 950 ohms.

Pivot the potentiometer mounting plate back into position so the gears properly engage, then tighten the mounting plate fasteners.

VERIFICATION	Confirm that the gears are fully engaged.

PREPARE THE EAPC CONTROLLER

Carefully remove the EAPC controller from its packaging. Handle the board carefully to avoid damaging components on either side of the circuit board.

Inspect the board to verify the fuses are in good condition and there are no components that have been damaged in shipping.

Locate the input signal selector at the bottom of the EAPC board.

Set the input signal selector for the signal being supplied to the actuator:

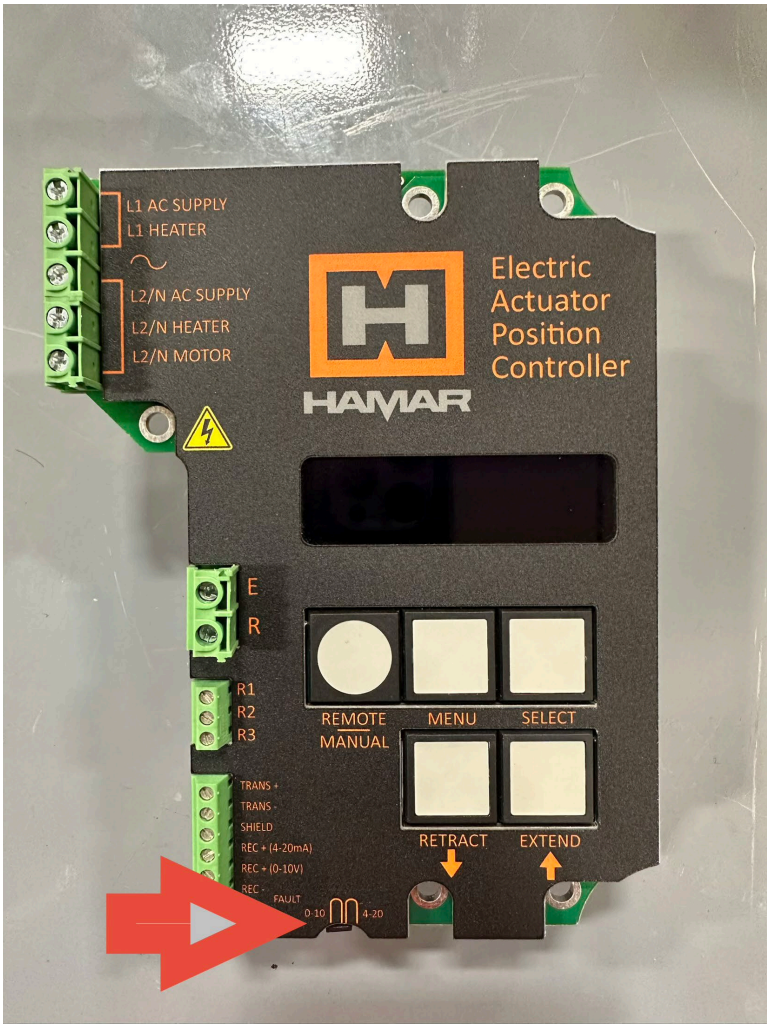
- **0-10 VDC**, or
- **4-20 mA**

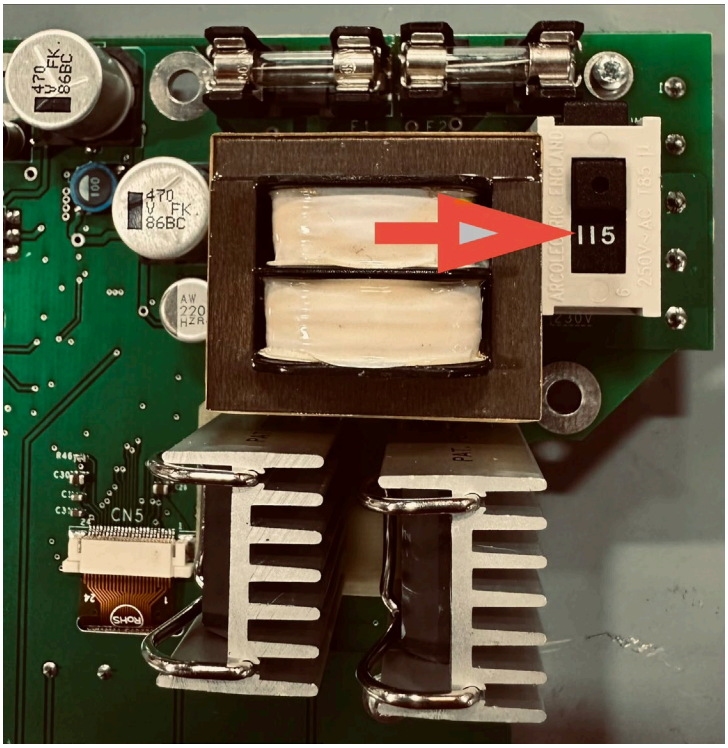
Locate the voltage selector switch.

Set the voltage selector to match the actuator's incoming power:

- **115 VAC**, or
- **230 VAC**

IMPORTANT	Verify both selector settings before applying power. An incorrect voltage setting may damage the controller.

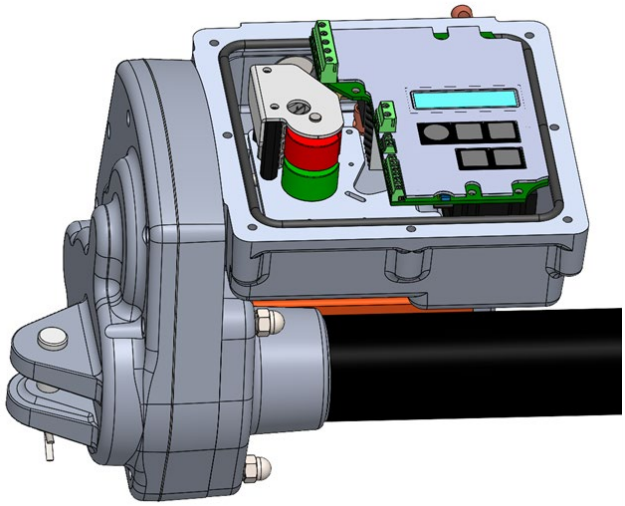




INSTALL THE EAPC CONTROLLER

Position the EAPC controller on the four newly installed standoffs as shown in the installation diagram.

Confirm that the board is secure and that no components are contacting surrounding hardware.



WIRE THE EAPC

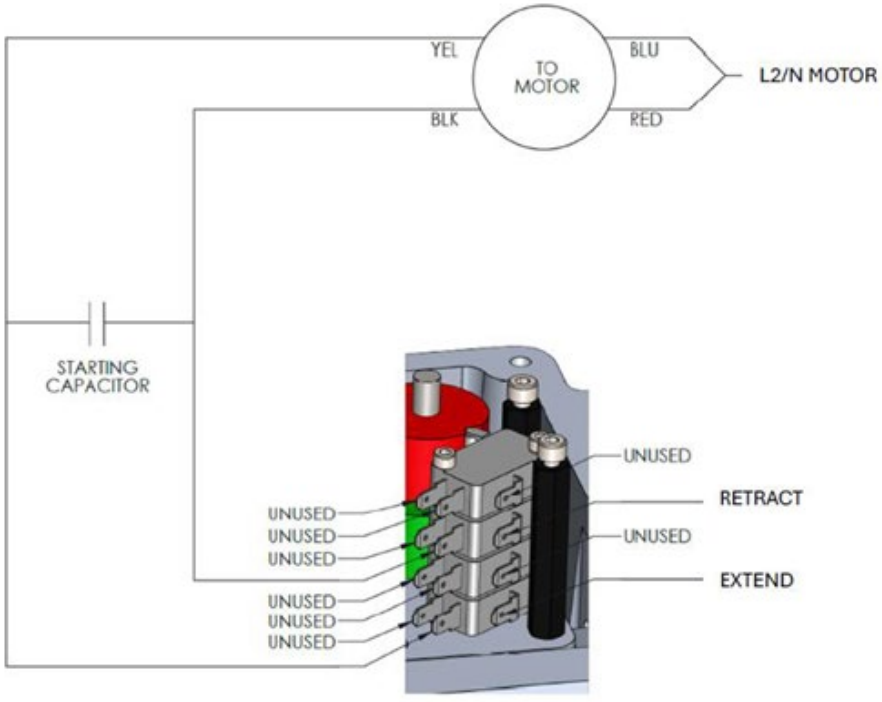
Wire the EAPC according to the supplied EAPC wiring diagram. Potentiometer wires are R1 – white, R2 – Red, R3 – Black.

Verify that all connections are installed in the correct terminals and are secure.

Check wire routing to ensure wires:

- Do not interfere with the limit switch mechanism.
- Do not interfere with the potentiometer gears.
- Will not be pinched when the housing cover is installed.

Note: The extend and retract wires may need to be trimmed for fitment.





INSTALL THE HEATER - AS REQUIRED

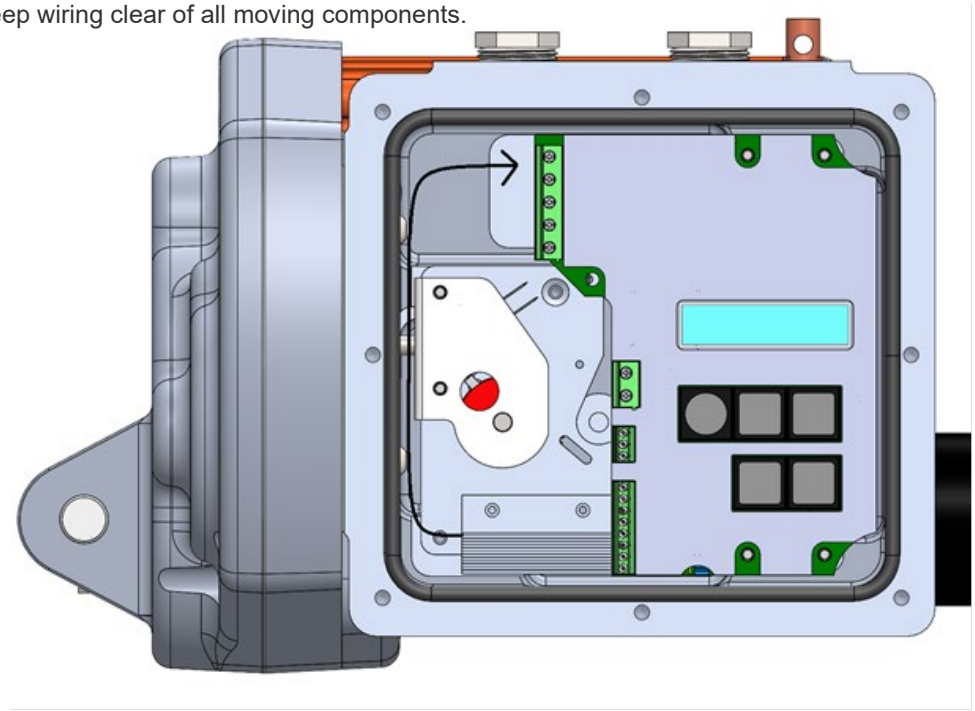
If a heater is NOT installed:

Install the heater supplied with the retrofit kit to the limit switch mounting plate as shown in the installation diagram.

Note: the heater will arrive outfitted with an inline thermostat installed.

Route the heater and thermostat wires around the limit switch assembly as shown in the installation diagram.

- Keep wiring clear of all moving components.



FINAL INSPECTION BEFORE POWER-UP

Inspect all wiring connections for proper termination and tightness.

Confirm the **input signal selector** is set correctly.

Confirm the **voltage selector** is set correctly.

Confirm the potentiometer gears are properly engaged (if installed).

Confirm the heater and thermostat wirings are properly routed (if installed).

Verify that no wires, terminals, or components interfere with the limit switch or gear mechanisms.

Confirm all EAPC mounting hardware and standoffs are secure.

CALIBRATION

After installation is complete, refer to the current Hamar **EAPC Installation, Operation & Maintenance Manual (IOM)** for the required calibration procedures.

Complete the applicable:

- Potentiometer calibration
- Transmitter calibration
- Receiver calibration

Verify proper actuator operation and position control according to the IOM.

COMPLETE THE RETROFIT

Once calibration and operational checks are successfully completed, reinstall the limit switch housing cover.

Install and tighten the limit switch cover fasteners.

Perform a final operational check of the actuator.

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