

Q209E Modutrol IV Manual Potentiometers

INSTALLATION INSTRUCTIONS



APPLICATION

These Q209E Manual Potentiometers set the minimum position of proportioning (Series 90 or Series 70) Modutrol IV motors.

FEATURES

- Q209E replaces Q209B.
- Models available with 15- or 300-ohm potentiometer for minimum position adjustment range of 50 or 100% of the motor stroke.
- Q209E is factory-mounted on a wiring box cover that replaces the Modutrol IV wiring box cover. Adjustment can be made externally.
- All wiring is connected within the motor wiring compartment.
- Q209E has color-coded leadwires for wiring convenience.

IMPORTANT:

The specifications given in this publication do not include normal manufacturing tolerances. Therefore, an individual unit may not exactly match the listed specifications. Also, this product is tested and calibrated under closely controlled conditions and some minor differences in performance can be expected if those conditions are changed.

TRADELINE® MODELS

TRADELINE® models are selected and packaged to provide both ease of stocking and handling and also maximum replacement value. TRADELINE® models available are:

Q209E1002: 150 ohm, cover mounted

Q209E1010: 300 ohm, cover mounted

Dimensions:

Q209E: 1 in. (25 mm) x 4-1/2 in. (114 mm) x 6-1/4 in. (159 mm).

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SPECIFICATIONS

Potentiometer Values:

150 ohms—adjusts minimum position from 0 to 50% of motor stroke.

300 ohms—adjusts minimum position from 0 to 100% of motor stroke.

Restrictions:

Q209E fits all Modutrol IV motors and can be used for both Series 70 and Series 90 motors. Check motor specifications for applicability of a minimum position resistor.

INSTALLATION

WHEN INSTALLING THIS PRODUCT...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings and description given on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

CAUTION

Disconnect power supply before installation to prevent electrical shock or equipment damage.

MOUNTING AND WIRING

Disconnect power supply before installation to prevent electrical shock or equipment damage. All wiring must comply with applicable codes and ordinances.

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Automation and Control Products Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care
1885 Douglas Drive North
Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Toronto, Ontario M1V 4Z9.

International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

Q209E

The potentiometer is cover-mounted on a replacement cover for the Modutrol IV wiring box (see Fig. 1). The Q209E is intended to replace Q209B potentiometers designed for use with M734/M934 motors. It allows minimum position adjustment with the wiring box cover in place.

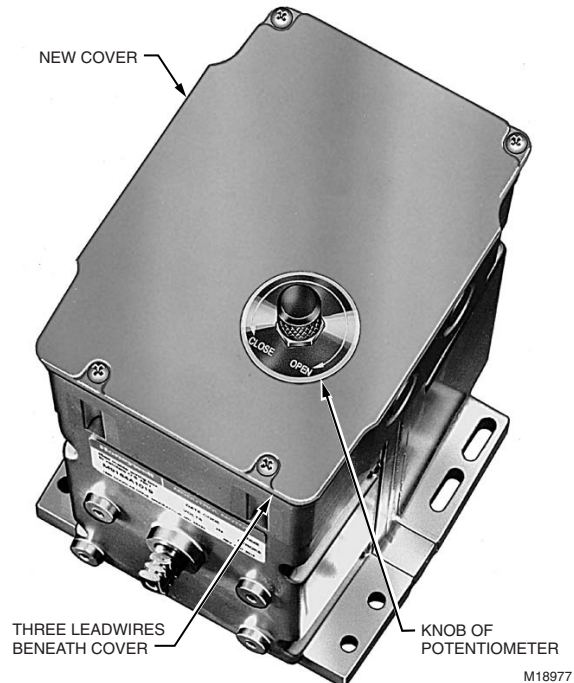


Fig. 1. Q209E Modutrol IV Manual Potentiometer (cover-mounted).

The Q209E is supplied with color-coded leadwires. All connections may be made within the wiring compartment of the motor. See Fig. 2 through 4.

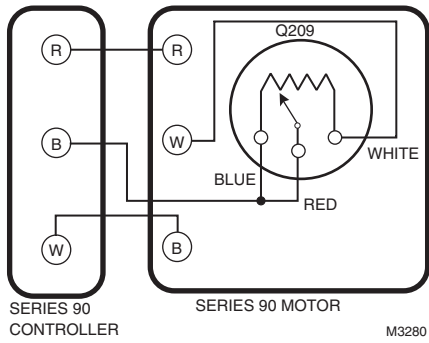


Fig. 2. Typical cooling hookup for the Q209E and a Modutrol IV motor.

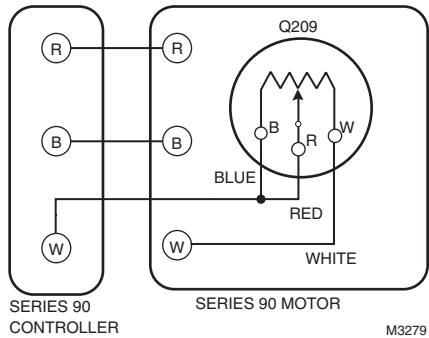
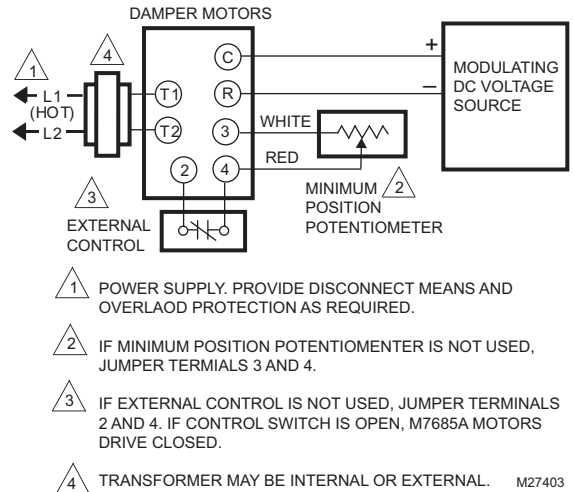


Fig. 3. Typical heating hookup for the Q209E and a Modutrol IV motor.



- 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- 2 IF MINIMUM POSITION POTENTIOMETER IS NOT USED, JUMPER TERMINALS 3 AND 4.
- 3 IF EXTERNAL CONTROL IS NOT USED, JUMPER TERMINALS 2 AND 4. IF CONTROL SWITCH IS OPEN, M7685A MOTORS DRIVE CLOSED.
- 4 TRANSFORMER MAY BE INTERNAL OR EXTERNAL. M27403

Fig. 4. Q209E with M7685.

CHECKOUT

After installation, check for proper operation of the system as follows:

1. 1. With the potentiometer in the closed position (fully counterclockwise rotation), the controller should be able to run the motor to fully close and fully open the damper. Set the controller to close the damper and adjust the Q209E to the open position (fully clockwise rotation). The motor should operate to open the damper to the minimum open position (50% when using a 150-ohm Q209 and 100% when using a 300-ohm Q209).
2. After checking the system operation, adjust the potentiometer to the desired setting.

OPERATION

The Q209E Manual Potentiometer limits the minimum position of a Modutrol IV motor. A typical application is a cooling system that uses the controller and a Modutrol IV motor to adjust outdoor and return air dampers to obtain maximum use of outdoor air for cooling. The Q209E is used to limit the minimum position of the dampers so that a specified amount of fresh outdoor air is admitted during the time the building is occupied. When used with spring return motors, removing external power overrides the minimum position potentiometer and returns the motor to the normal mechanical position (either open or closed, as applicable).

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