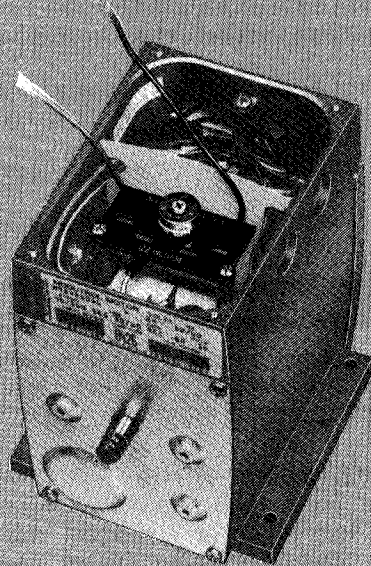


# Honeywell

Q209 MANUAL POTENTIOMETERS SET THE MINIMUM POSITION OF PROPORTIONING MODUTROL MOTORS.

- Models available with minimum position adjustment range of 50 or 100% of the motor stroke.
- Mounts directly on Modutrol motors.
- All wiring connected within the motor wiring compartment.
- Color-coded leadwires for wiring convenience.
- Slotted shaft for screwdriver adjustment.

## MANUAL POTENTIOMETERS



## Q209A,B,C

## SPECIFICATIONS

### MODELS:

**Q209A Manual Potentiometer**—for M744, M745, M941, M944, M945, M954, and M955 Modutrol motors with screw terminals (built before Nov. 1983). Includes potentiometer, color-coded leadwires, and bracket for mounting inside motor wiring compartment. Available in 150 and 300 ohm models.

**Q209B Manual Potentiometer**—for M734 and M934 Modutrol motors. Includes potentiometer, wiring compartment cover, color-coded leadwires, and screw-on shaft cover. Available in 150 and 300 ohm models.

**Q209C Manual Potentiometer**—for M744, M745, M941, M944, M945, M954, and M955 Modutrol motors with quick connect terminals (built after Nov. 1983). Includes potentiometer, color-coded leadwires, bracket and mounting screws for mounting inside low voltage wiring compartment. Available in 150 and 300 ohm models.

### 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.

## 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 given in the instructions and 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.

The Q209 is supplied with color-coded leadwires. All connections may be made within the wiring compartment of the motor. Refer to Fig. 1 or 2.

### **Q209A (For M744, M745, M941, M944, M945, M954, M955 Motors built before Nov., 1983)**

This model has a small bracket which mounts inside the wiring compartment of the motor. Remove motor cover and wire according to Fig. 1 or 2. The potentiometer and bracket are fastened to the post inside the motor with the screw provided. See Fig. 4. Replace motor cover.

### **Q209B (For M734 and M934)**

The Q209B is mounted on a replacement cover for the M934 motor. Wire the Q209B into the circuit (Fig. 1 or 2) and secure the cover in place on the motor.

*(continued on page 3)*

## ORDERING INFORMATION

**WHEN PURCHASING REPLACEMENT AND MODERNIZATION PRODUCTS FROM YOUR TRADELINE WHOLESALE OR YOUR DISTRIBUTOR, REFER TO THE TRADELINE CATALOG OR PRICE SHEETS FOR COMPLETE ORDERING NUMBER.**

### **SPECIFY—**

1. Order number.
2. Model number of motor to be used.
3. Potentiometer value.

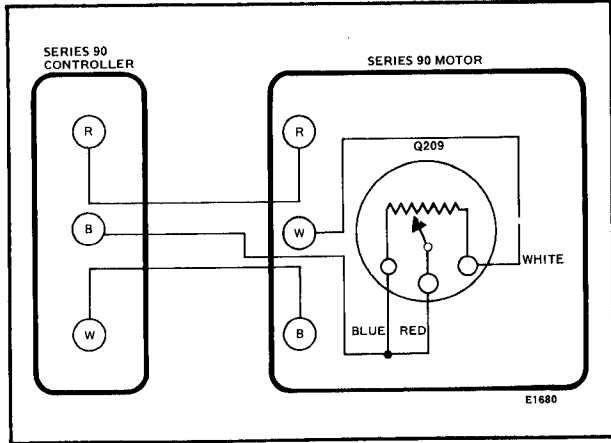
**IF YOU HAVE ADDITIONAL QUESTIONS, NEED FURTHER INFORMATION, OR WOULD LIKE TO COMMENT ON OUR PRODUCTS OR SERVICES, PLEASE WRITE OR PHONE:**

1. YOUR LOCAL HONEYWELL RESIDENTIAL DIVISION SALES OFFICE (CHECK WHITE PAGES OF PHONE DIRECTORY).
2. RESIDENTIAL DIVISION CUSTOMER SERVICE  
HONEYWELL INC., 1885 DOUGLAS DRIVE NORTH  
MINNEAPOLIS, MINNESOTA 55422-4386 (612)542-7500

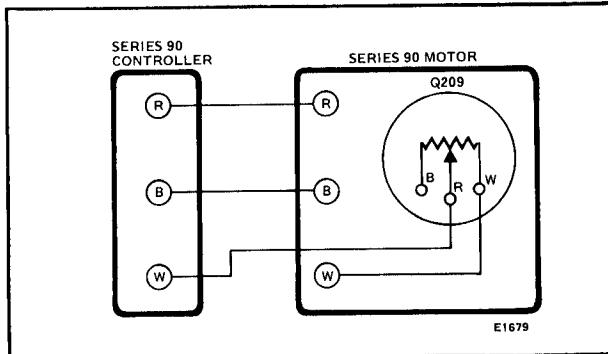
**(IN CANADA—HONEYWELL LIMITED/HONEYWELL LIMITEE, 740 ELLESMERE ROAD, SCARBOROUGH, ONTARIO M1P 2V9) INTERNATIONAL SALES AND SERVICE OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD.**

**Q209C (For M744, M745, M941, M944, M945, M954, M955 with quick connect terminals)**

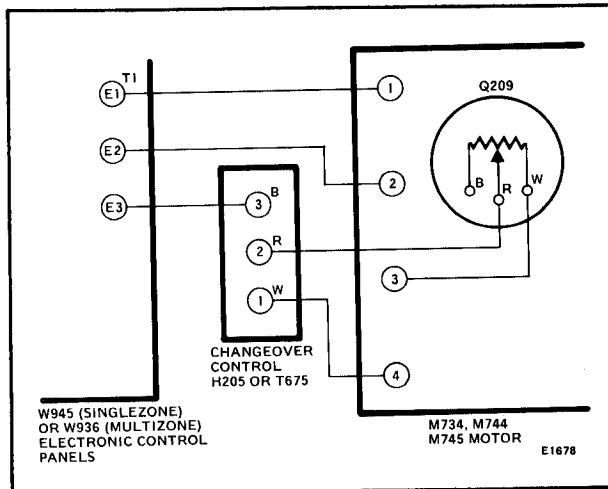
This model has a small panel which mounts inside the low voltage wiring compartment. White leadwire has quick connect termination for attachment to motor quick connect terminal. Remove motor cover and wire according to Fig. 1 or 2. The potentiometer and bracket mount with screws provided. See Fig. 5. Replace motor cover.



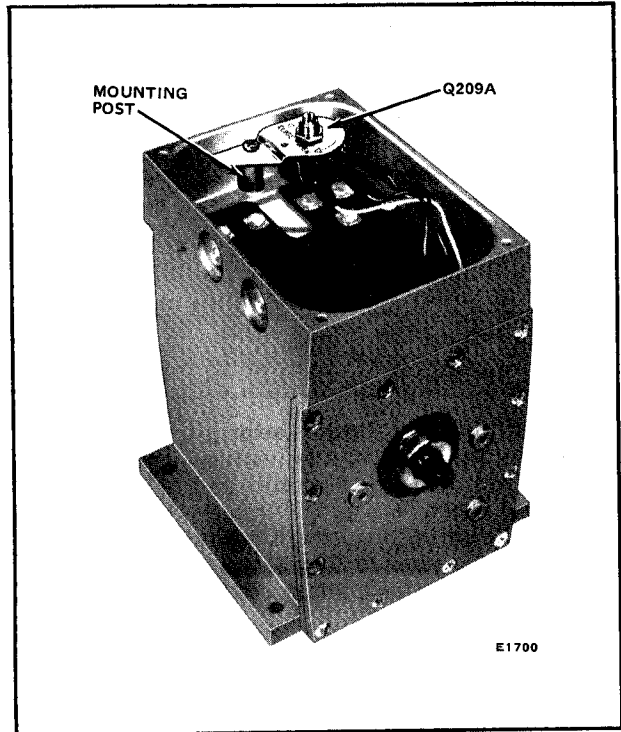
**FIG. 1—TYPICAL COOLING HOOKUP FOR THE Q209 AND A MODUTROL MOTOR.**



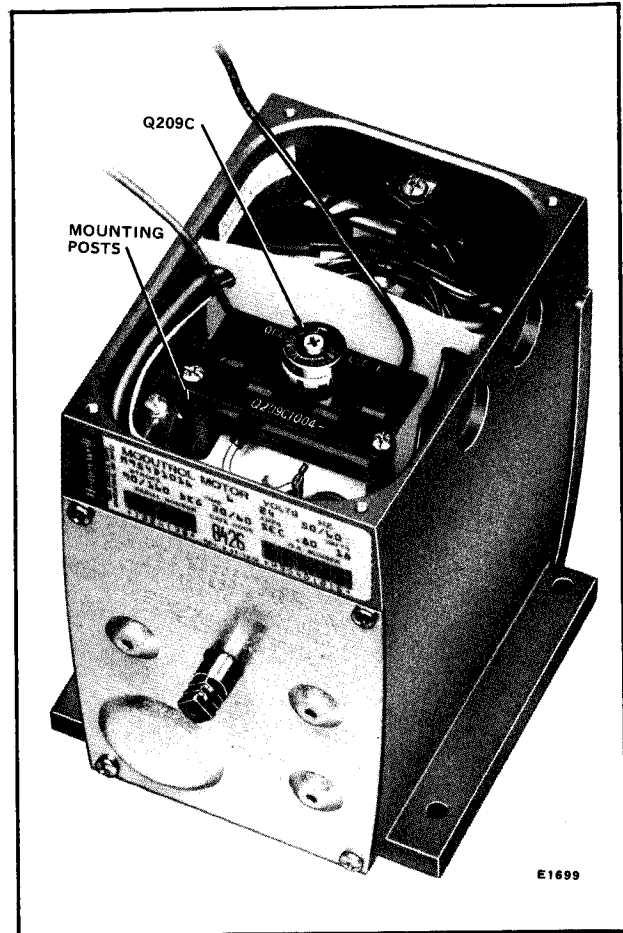
**FIG. 2—TYPICAL HEATING HOOKUP FOR THE Q209 AND A MODUTROL MOTOR.**



**FIG. 3—Q209 WITH M734D-G; M744A,B; or M745A-F; ECONOMIZER MOTOR IN A SINGLE ZONE OR MULTIZONE ELECTRONIC CONTROL SYSTEM.**



**FIG. 4—FASTEN Q209A TO POST INSIDE MOTOR WIRING COMPARTMENT.**



**FIG. 5—FASTEN Q209C TO MOUNTING POST INSIDE LOW VOLTAGE WIRING COMPARTMENT.**


## OPERATION


The Q209 Manual Potentiometer limits the minimum position of a Modutrol motor. A typical application is a cooling system which uses a controller and a Modutrol motor to adjust outdoor and return air dampers to

obtain maximum use of outdoor air for cooling. The Q209 is used to limit the minimum position of the dampers so that a specified amount of fresh outdoor air is admitted at all times.

## CHECKOUT

To adjust the potentiometer setting, use a screwdriver in the slotted shaft. After installation, check for proper operation of the system as follows.

With the potentiometer in the "closed" position (full counterclockwise  rotation), the controller should be able to run the motor to fully close and fully open the damper or valve. Set the controller to close the damper

or valve and adjust the Q209 to the "open" position (full clockwise  rotation). The motor should operate to close the damper or valve to the minimum open position (50 or 100%, depending upon model of Q209 installed).

After checking system operation, adjust potentiometer to the desired setting.