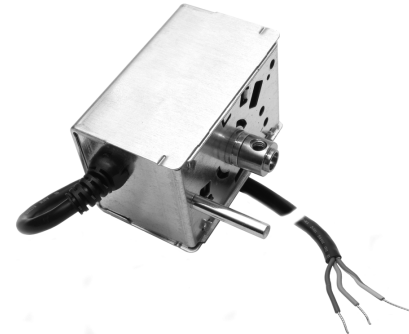


M447C Direct Drive Damper Actuator

INSTALLATION INSTRUCTIONS

APPLICATION

The M447C is a two position, 230 volt spring return damper operator designed to operate directly driven zone dampers, used to control air flow in ducts. The motor can be driven open using any 230 volt rated two position switch — e.g. a wall switch or a thermostat subbase switch.



SPECIFICATIONS

Electrical Rating: 230 Volt 50 Hz, 0.04 amp.

Electrical Connection: 1 metre cable attached

Nominal Angular Rotation: 90°

Torque: Min. 423 mNm* (60 in. oz) output torque available when motor is energized and device is at the spring returned position.

Motor Timing: Energized — at rated load, 230 VAC power source, with 25° C ambient: 38 sec. nominal.
De-energized - (Spring return) — 25 sec. nominal.

Ambient Temperature Rating: 5 to 60° C (+40 to 140° F)

Finish: dichromated

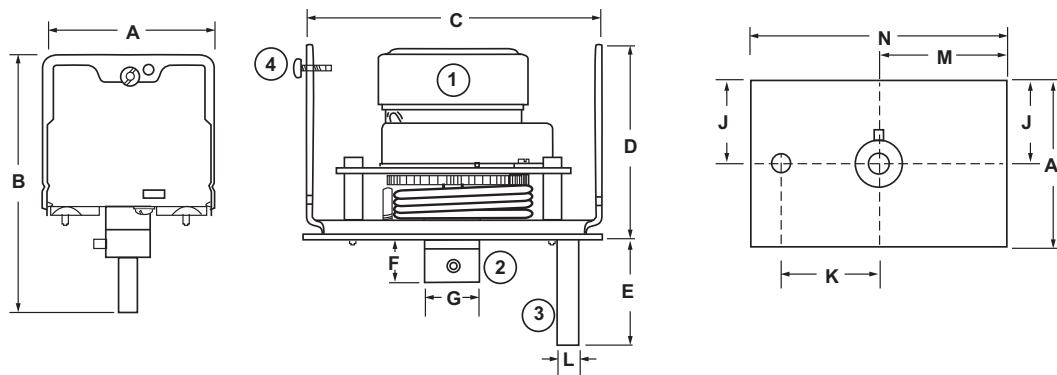
Direction of Shaft Rotation (when energized and viewed from the base or shaft end): clockwise

Mounting Means: direct connection to damper shaft

Mounting Position: multi-poise

Dimensions: See Fig. 1.

*mNm = milli newton metre.



LEGEND
 1 - DRIVING MOTOR
 2 - CONNECTION COUPLING
 3 - ANTI-ROTATION SHAFT
 4 - DEVICE CASE

NOMINAL DEVICE DIMENSIONS

	A	B	C	D	E	F	G	H	J	K	L	M	N
MM	60	88	85	56	31.5	17	16	6.4	28	33.5	6.3	45	85
IN	2-3/8	3-1/2	3-3/8	2-3/16	1-1/4	11/16	5/8	1/4	1-1/8	1-5/16	1/4	1-3/4	3-3/8

M31401

Fig. 1. Dimensional Details

INSTALLATION

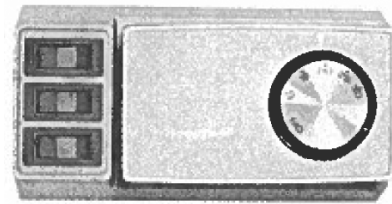
The M447C can be mounted directly to the protruding damper shaft using the sleeve attached to the operator output shaft. Drill the prescribed hole directly below the damper shaft

opening to accept the anti-rotation shaft protruding from the base of the motor. The length of the damper shaft to which the connection coupling is attached is such as to firmly hold the operator in a position to adequately engage the anti-rotation pin in the warm air duct. See Fig. 1 for the critical dimensions.



⚠ WARNING

- do not attempt to simulate operation of the operator by rotating the connection coupling, or the damper shaft when it is connected to the operator.
- abuse of this nature can result in stripping the gears in the drive train of the operator.



T6060B Thermostat mounted on Q660 Subbase.

CHECKOUT

When energized, verify that the operator connection coupling rotates in a clockwise direction (as viewed from the operator base end) and that the damper shaft turns with the couplings. If a saw cut is put in the opposite end of the damper shaft, aligned with the position of the damper on the shaft, the actual rotation of the operator — and the damper — can be readily checked. When de-energized, the motor should rotate damper in reverse direction by means of the integral return springs. In the satisfied or de-energized position, the damper blade should be fully closed or in the vertical position when the operator is mounted on the side of a horizontal duct.

If the motor does not operate smoothly and without hesitation throughout the entire opening and closing stroke, examine the damper, and the shaft, for free rotation within the duct. There should be at least a 1/4 of an inch clearance between all sides of the damper and the duct into which it is installed.

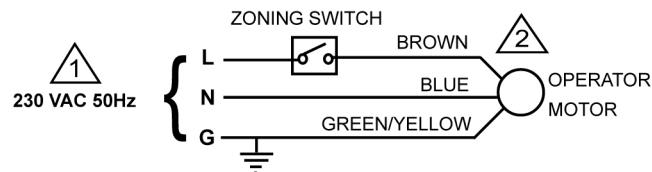
WIRING

⚠ CAUTION

Disconnect Power Supply before wiring the control to prevent electrical shock and equipment damage.

All wiring must comply with local electrical codes and ordinances. See Figs. 2 to 4 for typical wiring hookups of the M447B.

- M447B used in conjunction with Honeywell T6060B room thermostat, or the T6060 with the appropriate Q660ABC-NZ or Q660ABD-NZ switching subbase for the zone control.



1 PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED

2 NOMINAL CURRENT 0.04 AMP

Fig. 2. Typical M447C Hookup.

Automation and Control Solutions

Honeywell International Inc.
1985 Douglas Drive North
Golden Valley, MN 55422
customer.honeywell.com

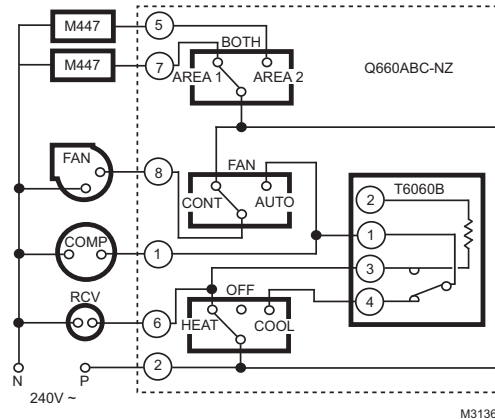


Fig. 3.

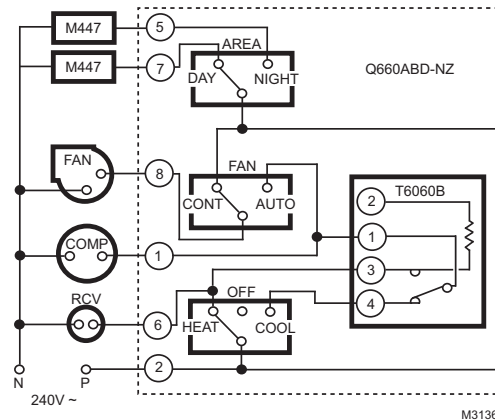


Fig. 4.

Note: in Fig 3, the three position switch centre off position de-activates the system.

Q660 Model Table

Model	Fig.	Switching	Number
Q660 ABCNZ	3	Conditioning — Heat/Off/Cool Fan — Continuous/Auto Zone Control — Area 1/Both/Area 2	3 Switches
Q660 ABDNZ	4	Conditioning — Heat/Off/Cool Fan — Continuous/Auto Area Control — Day/Area/Night	3 Switches

Honeywell