

DM7600A, DM7600B Commercial Zone Damper/Actuator

PRODUCT DATA



FEATURES

- Six damper sizes, 6 to 16 inches, in 2 inch increments.
- One or two accessory switches available, adjustable over 90° stroke.
- Three inputs available: floating, 2-10 Vdc, 4-20 mA.
- Same accessories and features available as for ML6161 or ML7161.

SPECIFICATIONS

Models:

Actuators are 35 lb-in. torque, 90 second or 7 minute timing, which control 90° dampers. Six damper sizes ranging from 6 to 16 inches (in two inch increments) are available. See Table 1.

APPLICATION

The DM7600 Commercial Zone Damper/Actuator consists of either an ML7161A (DM7600A) or an ML6161A (DM7600B) Direct Coupled Actuator (DCA) assembled to a round duct damper section (6 to 16 inches in diameter).

The DM7600 is intended to be used in commercial zoning systems as an individual zone damper controlled by a zone thermostat, and as a bypass damper controlled by a duct static pressure sensor/controller.

A commercial zoning system controls discharge of a constant volume HVAC unit with a series of zone dampers and a bypass damper to provide the required space temperature by varying both the delivered air temperature and volume. The zone space thermostat positions the corresponding DM7600 to satisfy the space requirements.

DM7600B models with 7-minute actuators were specifically designed for use with the T641 Floating Control Thermostat and can be used for individual room zoning, etc.

Table 1. DM7600 Models.

| OS Number | Actuator | Damper Size (in.) |
|-------------|-------------|-------------------|
| DM7600A1005 | ML7161A2008 | 6 |
| DM7600A1013 | | 8 |
| DM7600A1021 | | 10 |
| DM7600A1039 | | 12 |
| DM7600A1047 | | 14 |
| DM7600A1054 | | 16 |
| DM7600B1004 | ML6161A2009 | 6 |
| DM7600B1012 | | 8 |
| DM7600B1020 | | 10 |
| DM7600B1038 | | 12 |
| DM7600B1046 | | 14 |
| DM7600B1053 | | 16 |
| DM7600B1061 | ML6161A2017 | 6 |
| DM7600B1079 | | 8 |
| DM7600B1087 | | 10 |
| DM7600B1095 | | 12 |
| DM7600B1103 | | 14 |
| DM7600B1111 | | 16 |



Dimensions:

ML6161, ML7161: Refer to form 63-2209.
 Damper Portion: See Table 2.

Electrical Ratings (Actuator):

Input Voltage: 24 Vac, +20/-30%, 50-60 Hz.
 Power Consumption (Maximum), at 24 Vac:
 ML6161A: 2.0W, 0.085A, 1.8 VA.
 ML6161A: 4.5W, 0.20A, 4.8 VA.

Temperature Ratings:

Ambient: 32 to 130° F [0° C to 52° C].
 Shipping and storage: -20° F to 130° F [-29° C to 40° C].

Humidity Ratings: 5 to 95% RH noncondensing.

Table 2. Dimensions, Pressure Drop, and Flow Rates.

| Diameter in. (mm) | Length in. (mm) | Pressure Drop ^a in. w.c. (kPa) | Flow Rate cfm |
|-------------------|-----------------|---|---------------|
| 6 (152) | 12 (305) | 0.05 (0.012) | 180 |
| | | 0.075 (0.019) | 210 |
| | | 0.10 (0.025) | 240 |
| 8 (203) | 12 (305) | 0.05 (0.012) | 410 |
| | | 0.075 (0.019) | 485 |
| | | 0.10 (0.025) | 580 |
| 10 (254) | 12 (305) | 0.05 (0.012) | 693 |
| | | 0.075 (0.019) | 849 |
| | | 0.10 (0.025) | 980 |
| 12 (305) | 13 (330) | 0.05 (0.012) | 1200 |
| | | 0.075 (0.019) | 1460 |
| | | 0.10 (0.025) | 1600 |
| 14 (356) | 15 (381) | 0.05 (0.012) | 1336 |
| | | 0.075 (0.019) | 1636 |
| | | 0.10 (0.025) | 1890 |
| 16 (406) | 17 (432) | 0.05 (0.012) | 1690 |
| | | 0.075 (0.019) | 2080 |
| | | 0.10 (0.025) | 2400 |

^aPressure drop (normal operating range):
 Zone Dampers: 0.05 to 0.075 in. w.c.
 Bypass Dampers: 0.05 to 0.1 in. w.c.

Materials:

Damper Blade—16 GA corrosion resistant steel.
 Blade Seal—Neoprene rubber with UL94HF1 rating.
 Damper Shell:
 6 to 10 in.: 24 GA galvanized steel.
 12 to 16 in.: 20 GA galvanized steel.

Damper Leakage: 1% nominal of flow.

Damper Position vs. Flow Rate: See Fig. 1 through 6.

Torque Ratings: See Table 3.

Table 3. Torque Ratings.

| | Torque |
|---------------|---------------------|
| Running | 35 lb-in. (4.0 N•m) |
| Breakaway | 35 lb-in. (4.0 N•m) |
| Stall Minimum | 45 lb-in. (5.0 N•m) |
| Stall Maximum | 70 lb-in. (8.0 N•m) |

Motor Timings (at 60 Hz):

ML6161A2009, ML7161A2008: 90 seconds.
 ML6161A2017: 7 minutes.

Approvals:

Underwriter's Laboratories Component Recognized:
 File No. E4436, Guide No. XAPX, CSA certified.

Accessories:

200976A Auxiliary Potentiometer (0 to 500 ohm).
 200976C Auxiliary Potentiometer (0 to 2000 ohm).
 201052A Auxiliary Switch (one).
 201052B Auxiliary Switch (two).
 201391 Shaft Adapter.
 4074ENJ Bag Assembly—includes stop pin, shaft adapter, and two minimum-position screws.
 4074ENY Bag Assembly—includes stop pin and shaft adapter.
 4074EVK Short Shaft Extender.
 7640QW Metal Enclosure—for attaching conduit to actuator.
 T641 Floating Thermostat—for use with seven-minute actuators.
 T6984 Floating Thermostat—for use with 90-second and seven-minute actuators.
 T7984 Modulating Thermostat—for use with ML7161.

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, Scarborough, Ontario M1V 4Z9.

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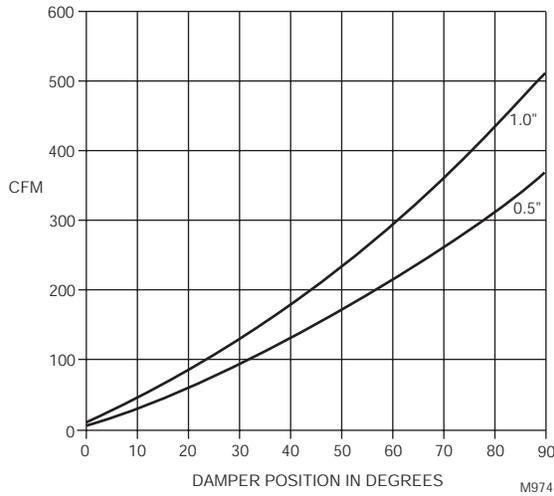


Fig. 1. 6-inch DM7600A,B flow rate vs. damper position.

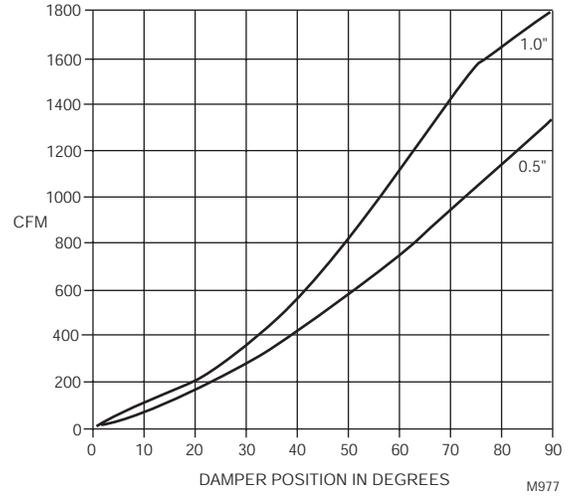


Fig. 4. 12-inch DM7600A,B flow rate vs. damper position.

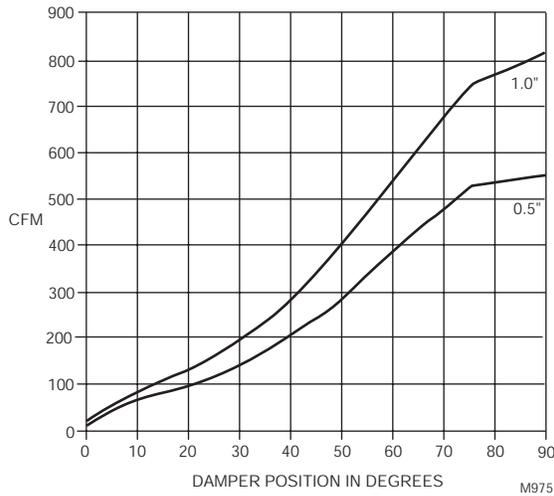


Fig. 2. 8-inch DM7600A,B flow rate vs. damper position.

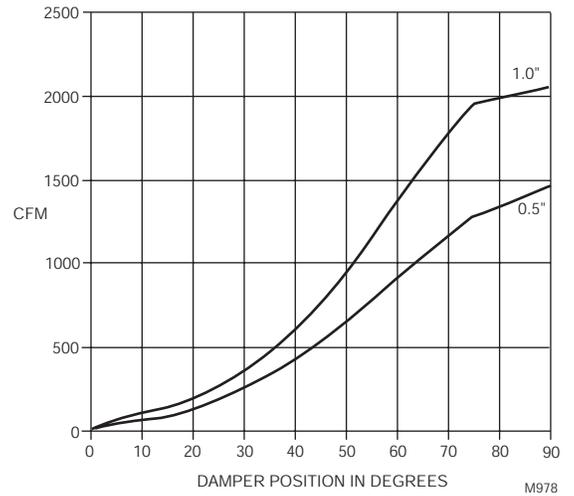


Fig. 5. 14-inch DM7600A,B flow rate vs. damper position.

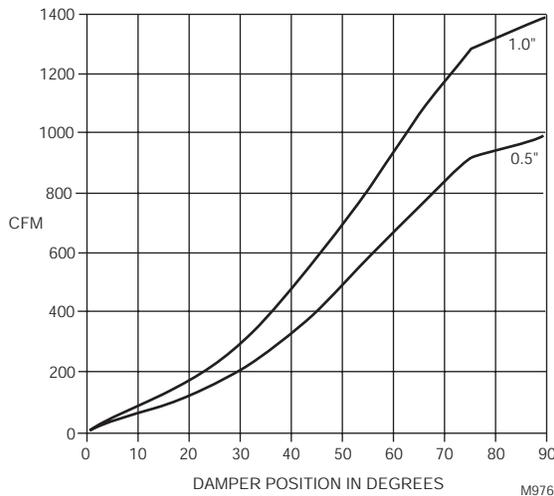


Fig. 3. 10-inch DM7600A,B flow rate vs. damper position.

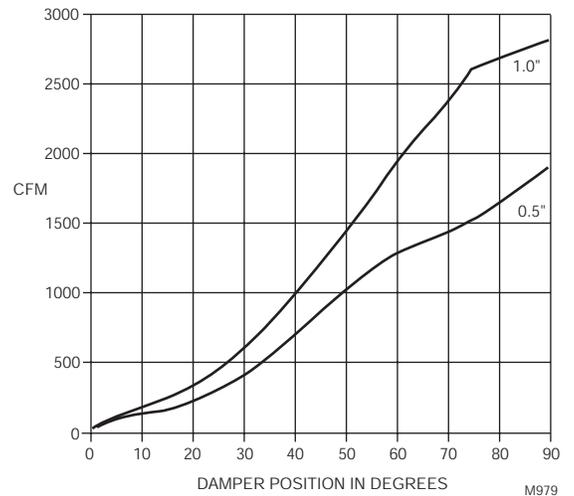


Fig. 6. 16-inch DM7600A,B flow rate vs. damper position.

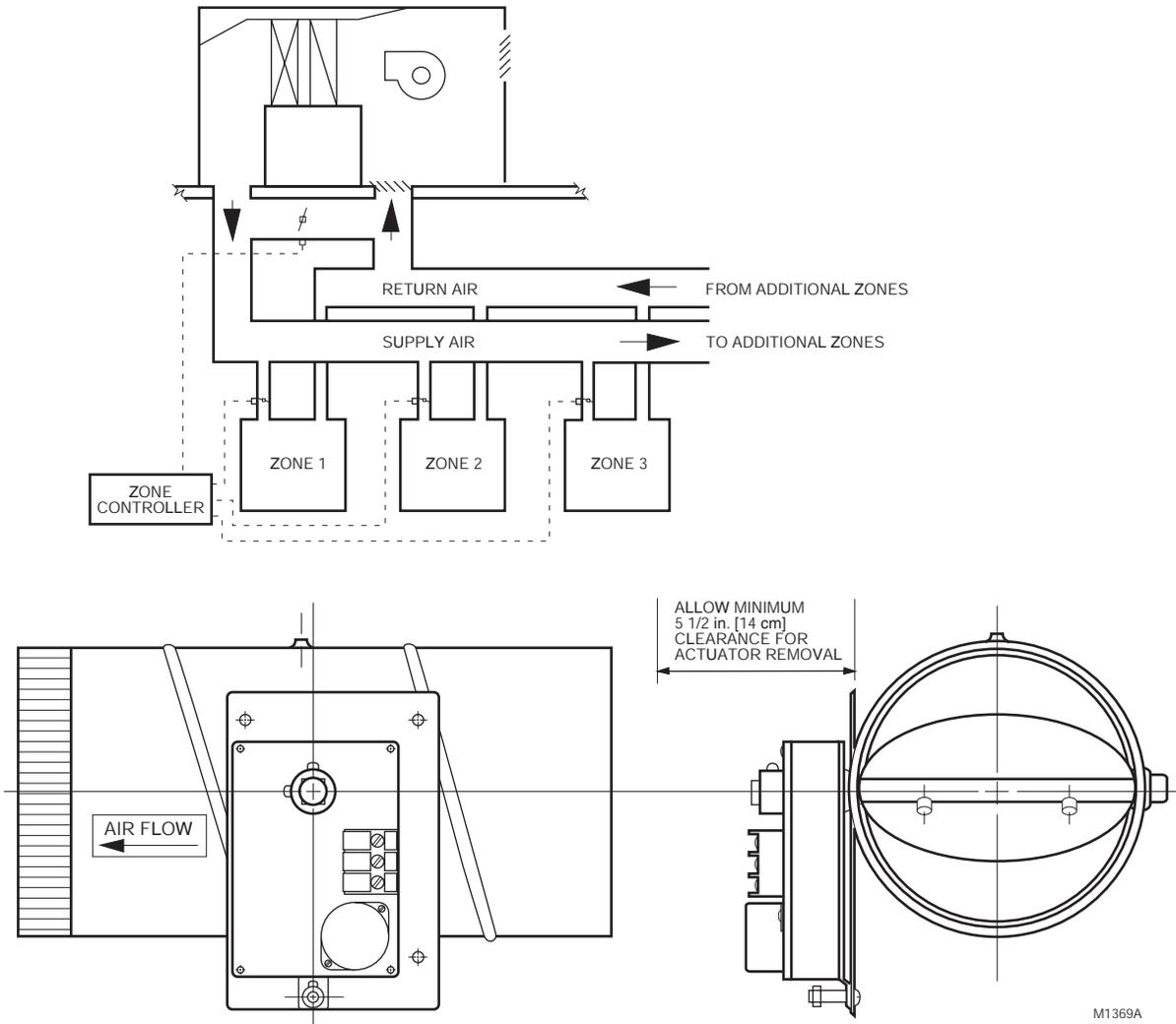


Fig. 7. Typical multizone configuration.

INSTALLATION

CAUTION

Motor Damage Hazard.
Deteriorating vapors and acid fumes can damage metal parts.
 Install motor in areas free of acid fumes and other deteriorating vapors.

CAUTION

Careless Installation Hazard.
Forcibly turning the motor shaft damages the gear train and stroke limit contacts.
 Never turn the motor shaft manually (by hand or with a wrench).

Choose a location for the damper/actuator that allows for enough clearance for servicing.

Refer to form 63-2209 for wiring actuators to the control system and complete Operation and Checkout procedures.

Honeywell

Automation and Control Solutions

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