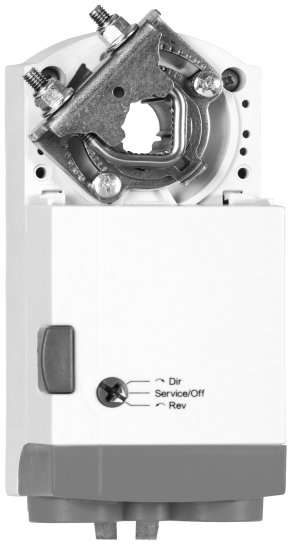
Honeywell

CN6105A1211, CN6110A1201

NSR DAMPER ACTUATORS FOR FLOATING AND TWO-POSITION CONTROL WITH INTERNAL FEEDBACK SWITCHES

PRODUCT DATA



GENERAL

This non-spring return direct-coupled damper actuator provides floating and two-position control for:

- air dampers,
- VAV units,
- air handlers,
- ventilation flaps,
- louvers, and
- reliable control for air damper applications with up to 10 sq ft / 44 lb-in. (5 Nm) and 20 sq ft / 88 lb-in. (10 Nm) (seal- less damper blades; air friction-dependent).

FEATURES

- **Stainless-steel shaft adaptor**
- **Declutch for manual adjustment**
- **Adjustable mechanical end limits**
- **Removable access cover for direct wiring**
- **Mountable in any orientation**
- **Rotation direction and service/OFF switch**

SPECIFICATIONS

Supply voltage
CN6105A/CN6110A 24 Vac/dc -15%/+20%, 50/60 Hz

Nominal voltage
CN6105A/CN6110A 24 Vac/dc, 50/60 Hz

All values stated hereinafter apply to operation under nominal voltage conditions.

Power consumption
CN6105A/CN6110A 5 VA / 2 W

Ambient limits
Ambient operating limits -5...+140 °F (20...+60 °C)
Ambient storage limits -22...+176 °F (-30...+80 °C)
Relative humidity 5...95%, non-condensing

Safety
Protection standard IP54
Protection class II as per EN 60730-1
Overvoltage category II

Lifetime
Full strokes 60000
Repositions 1.5 million

Mounting
Round damper shaft 3/8 in…5/8 in.
Square damper shaft 1/4 in…1/2 in.; 45° steps
Shaft length min. 1-5/8 in.

Internal Feedback Switches
Rating Class II
Triggering points 5° / 85°

Torque rating
CN6105A 44 lb-in. (5Nm)
CN6110A 88 lb-in. (10 Nm)

Runtime for 90°
CN6105A/CN6110A 90 sec (dc / 60 Hz ac)
110sec (50 Hz ac)

Rotation stroke 95° (Max.)

Dimensions see “Dimensions” on page 6

Weight (without cables) 1 lbs.

Noise rating 35 dB(A) max. at 1 m

EN0B-0570-CH33

INSTALLATION

To avoid personal injury (electrical shock) and to prevent equipment damage, before installation, you must remove power.

These actuators are designed for single-point mounting.

Mounting Instructions

All information and steps are included in the Installation Instructions (Product Literature No. 62-0224) supplied with each actuator.

Mounting Position

The actuators can be mounted in any position (IP54 is dependent upon orientation; see Fig. 8). Choose a mounting position permitting easy access to cables and controls.

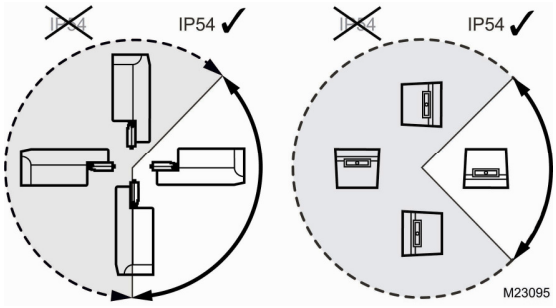


Fig. 1. Mounting for IP54

NOTE: Further, in order to guarantee IP54, only original Honeywell grommets may be used.

Anti-Rotation Bracket and Screws

If the actuator is to be mounted directly on a damper shaft, use the anti-rotation bracket and screws included in the delivery package. The min. distance between the center of the damper shaft and the middle of the anti-rotation bracket is 3.35 in.; a max. of 4.25 in. is allowed (see also Fig 10).

Depending upon the specifics of your mounting site, the actuator may shift in position slightly while tightening the screws at the top of the shaft adapter. The anti-rotation bracket features a T-piece with a 5-mm-long shank to accommodate for this movement. It is important to ensure that this play is not impeded.

Universal Shaft Adapter

The universal shaft adapter can be used for shafts of various diameters and shapes (round: 3/8...5/8 in. and square: 1/4...1/2 in.).

WIRING

⚠ CAUTION

To avoid personal injury (electrical shock) and to prevent equipment damage, before wiring, you must remove power.

Access Cover

IMPORTANT

Once the access cover has been removed, please take care to avoid damaging any of the parts now accessible.

The access cover can be unscrewed and removed in order to gain access to the terminal block(s) and perform wiring.

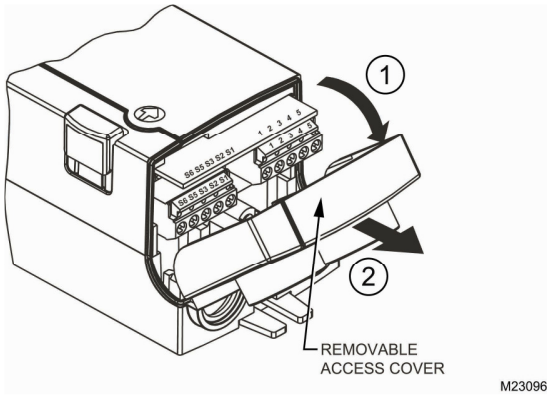


Fig. 2. Access Cover

Wiring Diagrams

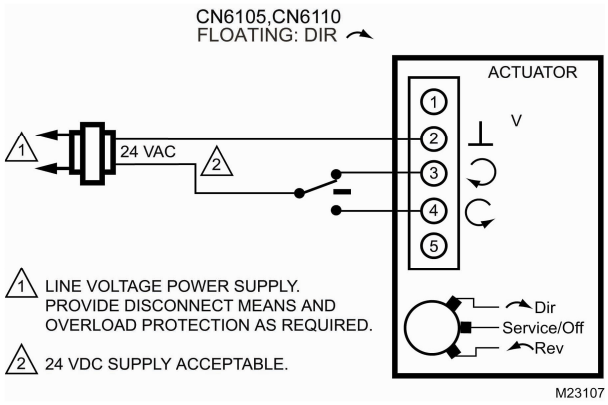


Fig. 3. CN6105/CN6110 (floating mode)

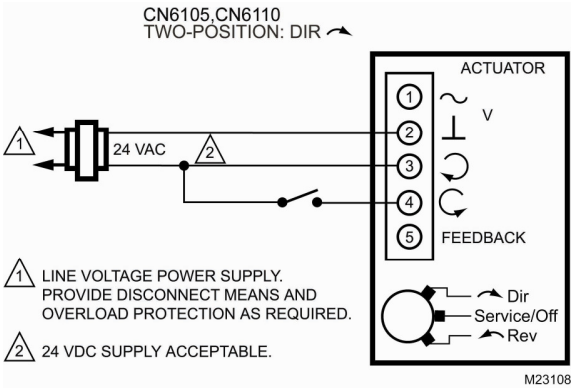


Fig. 4. CN6105/CN6110 (2-position mode)

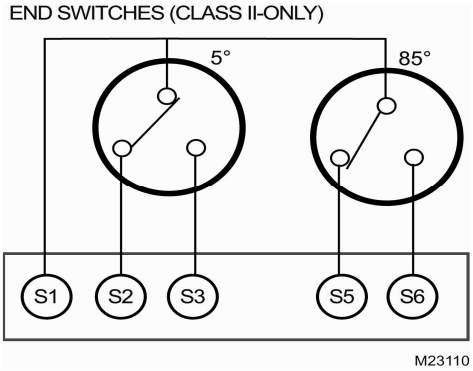


Fig. 5. End switches

NOTE: Both internal end switches must be connected to the same power source.

Tables 2 and 3 summarize the information presented in the preceding wiring diagrams.

Table. 1. Signals at terminals

ter-minal	signal in floating	signal in 2-pos. mode
2	common ~/-	common ~/-
3	24 V ~/+ (control signal)	24 V ~/+ (control/ power signal)
4	24 V ~/+ (control signal)	24 V ~/+ (control signal/power)
NOTE: All cables connected to these terminals must be equipped with spark suppression.		

Table 2. Internal feedback switches

terminal	type of switch
S1	common lead for switches A and B
S2/S3	change-over switch A (S1/S2 opens and S1/S3 closes when shaft adapter moves CW past 5°; reverts to original state when shaft adapter moves CCW past 5°).
S5/S6	change-over switch B (S1/S6 closes when shaft adapter moves CW past 85°; reverts to original state when shaft adapter moves CCW past 85°).

DIMENSIONS

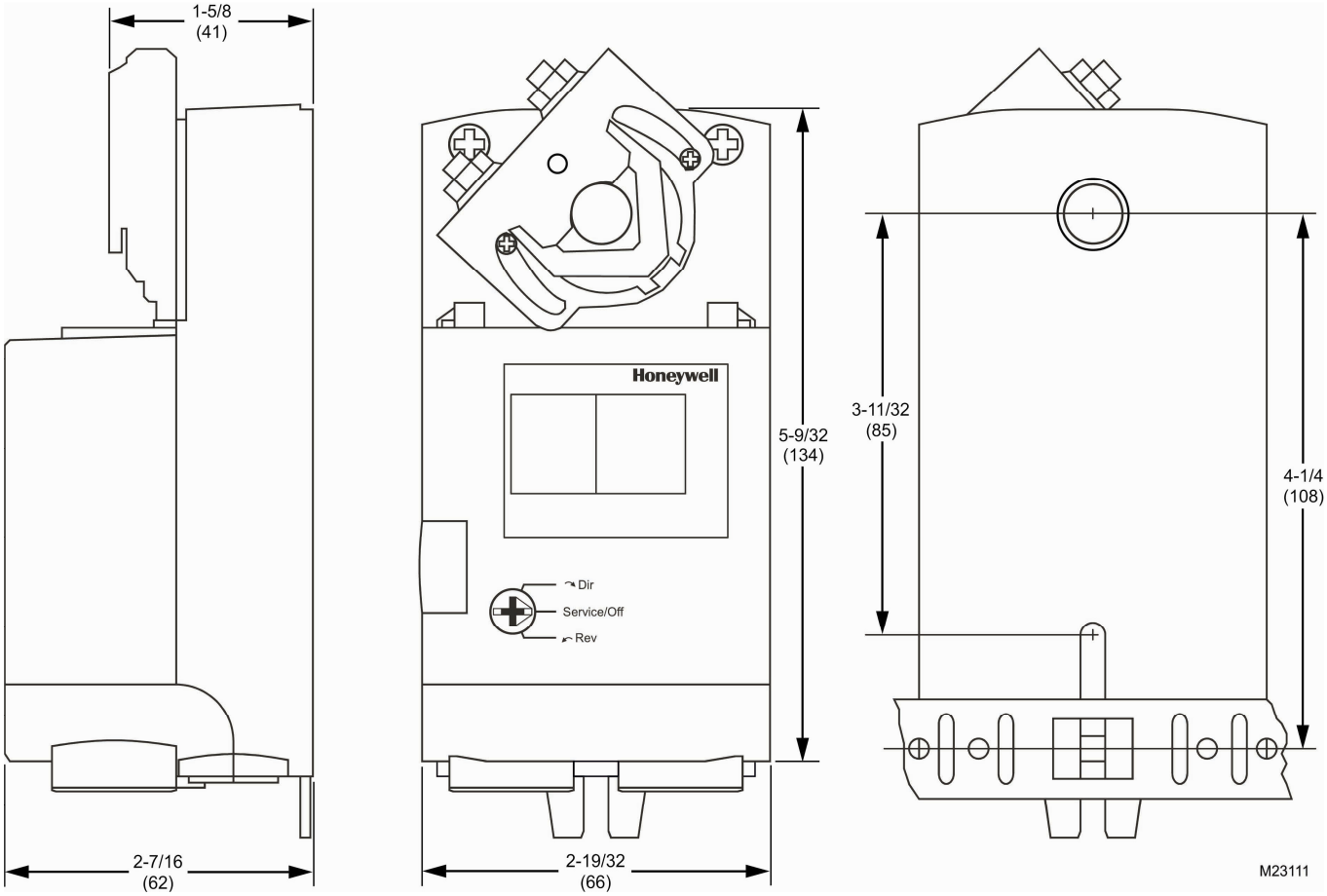


Fig. 6. Dimensions (in in.)

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