



N34 Series Non-Spring Return Direct Coupled Actuators MN6134, MN7234

N34 Series Non-Spring Return Direct Coupled Actuators (DCA) are used within heating, ventilating, and air-conditioning (HVAC) systems. They can drive a variety of quarter-turn, final control elements.

Applications include:

- Volume control dampers, mounted directly to the drive shaft or remotely (with the use of accessory hardware).
- Quarter-turn rotary valves, such as ball or butterfly valves mounted directly to the drive shaft.
- Linear stroke globe or cage valves mounted with linkages to provide linear actuation.

SPECIFICATIONS

Torque Ratings:

- Typical Holding, Driving: 300 lb-in. (34 N•m).
- Stall Maximum (fully open at 75°F):
 - Floating: 327 lb-in. (37 N•m).
 - Modulating: 354 lb-in. (40 N•m).

Electrical Ratings:

- See Table 2.

Electrical Connections:

- Field wiring 14 to 22 AWG (2.0 to 0.344 mm sq) to screw terminals, located under the removable access cover.

Stroke:

- 95° ±3°.

Controller Type:

- See Models.
- Modulating Models Only:
 - Input Impedance: 100K ohms minimum.
 - Feedback Signal: 0 or 2-10 Vdc.
 - Driving Current: 3 mA minimum.

Timing (At Rated Torque and Voltage):

- 95 seconds at 60 Hz; 110 seconds at 50 Hz.

Temperature Ratings:

- Ambient: -5°F to 140°F (-20°C to 60°C).
- Shipping and Storage: -40°F to 175°F (-40°C to 80°C).

Humidity Ratings:

- 5% to 95% RH noncondensing.

Design Life (at Rated Voltage):

- 60,000 full stroke cycles; 1,500,000 repositions.

Dimensions:

- See Fig. 1.

Device Weight:

- 3.2 lb (1.45 kg).

Mounting:

- Self-centering shaft adapter (shaft coupling).
 - Round Damper Shafts: 0.375 to 1.06 in. (10 to 27 mm).
 - Square Damper Shafts: 1/2 to 3/4 in. (13 to 19 mm).
 - Actuator can be mounted with shaft in any position.

SPECIFICATION DATA

FEATURES

- New self-centering shaft adapter.
- Access cover to facilitate connectivity.
- Declutch for manual adjustment.
- Mechanical end limits.
- Field-installable auxiliary switches.
- Rotation direction selectable by switch.
- Mountable in any orientation (no IP54 if upside down).
- Mechanical position indicator.
- UL Listed.

Minimum Damper Shaft Length:

- 7/8 in. (22 mm); 3 in. (76 mm) recommended.

Noise Rating at 1m (Maximum):

- Holding: 20 dBA (no audible noise).
- Driving: 40 dBA.

Environmental Protection Ratings:

- NEMA2 or IP54 when mounted on horizontal shaft with access cover below the shaft.

Models:

N	Non-Spring Return Fail Safe Mode		
	34	300 lb-in. (34 N•m)	
		24	24 Vac Floating (Series 60) Control
		010	24 Vac Modulating Control
			Fixed Zero/Span, No End Switches
N	34	010	

Approvals:

- UL/cUL.
- UL873, File No. E4436; Guide No. XAPX.
- CE.
- C-TICK.
- UL94 Plenum Rating.

Accessories:

- 27518 Balljoint (5/16 in.).
- 103598 Balljoint (1/4 in.).
- 205860 Electronic Minimum Position Potentiometer.
- 27520A-E,G,H-L,Q Pushrod (5/16 in. diameter).
- 32000085-001 Water-tight Cable Gland/Strain-relief Fitting (10 pack).
- 32003036-001 Weather Enclosure.
- 32004254-003 Self-Centering Shaft Adapter (supplied with actuator).
- 50001194-001 Foot Mount Kit.
- SW2-US Auxiliary Switch Package.
- See also Form 62-0203.



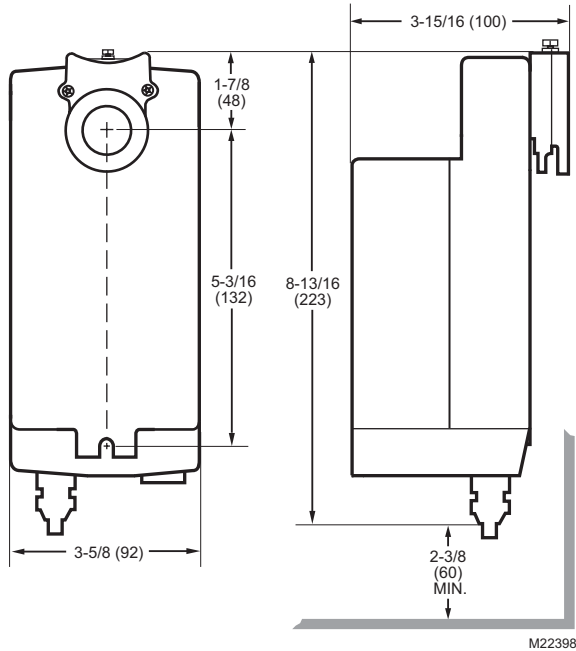


Fig. 1. Dimensional drawing of actuator in in. (mm).

Table 1. O.S. Number Selection

M	Electrical Motor
N	Fail Safe Function (Non-Spring Return)
61	24 Vac Floating, Two-Position Control
72	24 Vac Modulating
34	300 lb-in. (34 N•m)
A	Standard U.S. Model
1	No Feedback
2	Voltage Feedback Signal
0	No End Switches
XX	System Controlled Numbers

M	N	72	34	A	2	0	XX
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TYPICAL SPECIFICATION

Non-spring return actuators shall be direct coupled type requiring neither crankarm nor linkage and be capable of direct mounting to a jackshaft of up to 1.05 in. diameter. The actuator shall connect to the shaft using a removable output hub with a self-centering shaft coupling. This coupling shall provide concentric mounting and include an integral adjustable range-stop mechanism.

The actuator shall provide two-position, floating, or proportional control. Proportional control refers to direct acceptance of 0-10 Vdc, 2-10 Vdc, or 4-20 mA input signal. Proportional control models provide a 2-10 Vdc feedback signal. Actuators shall provide wiring terminals located within an integral access cover with conduit connections. Proportional and floating actuators shall have a rotation direction control switch accessible on the cover. Proportional actuators shall use a brushless DC submotor. Floating actuators shall use an AC synchronous submotor with overload protection at all angles of rotation by a magnetic clutch mechanism that provides an absolute limit to the output torque without a physical link between the motor and the gear train.

Non-spring return actuator design must be for use in either clockwise or counterclockwise operation with minimum performance of 60,000 full-stroke powered cycles at actuator rated torque and temperature, and 1,500,000 repositions as documented in the product literature. Run time shall be constant and independent of: load, temperature, and supply voltage (within specifications). All actuators shall be UL873 and cUL (CSA22.2) listed, have a five year warranty, and be manufactured under ISO 9001 International Quality Control Standards.

Actuators shall be manufactured by Honeywell.

Table 2. Electrical Ratings.

Model(s)	Power Input		Power Consumption (VA)	
	Voltage	Frequency	Driving	Holding
Modulating	24 Vac±20% (Class 2), 24 Vdc	50/60 Hz.	16	5
Floating	24 Vac±20% (Class 2), 24 Vdc	50/60 Hz.	40	8

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