Direct Coupled Damper Actuators—Non-Spring Return

N05 Series: MN6105; MN7505
Non-Spring Return Direct Coupled Actuator, 44 lb-in

This non-spring return direct-coupled damper actuator provides modulating and floating/2-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).

- Declutch for manual adjustment
- Adjustable mechanical end limits
- Removable access cover for direct wiring
- Mountable in any orientation
- Function selection switch for selecting modulating or floating/2-position control

**Dimensions in inches (millimeters)**

![Dimensions Diagram]

**Actuator Type:** Damper; Valve

**Rotational Stroke:** 95 ±3 degrees

**Fail Safe Mode:** Non-Spring Return

**Torque:** 44 lb-in. (5 Nm)

**Maximum Stall Torque:** 70 lb-in. (8 Nm)

**Electrical Connections:** Enclosed screw terminal strip (22 to 14 AWG)

**Environmental Rating:** NEMA2

**Frequency:** 50 Hz; 60 Hz

**Manual operation:** Declutch mechanism

**Mounting:** Direct Coupled

**Maximum Noise Rating, Driving (dBA @ 1m):** 35

**Rotation to Open:** By switch

**Rotational Stroke Adjustment:** Dual Integral Adj. Stops (3 degree increments)

**Compatible Damper Shafts:** 1/4 to 1/2 inch square; 3/8 to 5/8 inch round (6-13 mm square; 8-16 mm round)

**Shaft Adapter Type:** U-bolt clamp

**Supply Voltage:** 24 Vac +20%, -15%, 24 Vdc

**Materials:** Plenum rated plastic housing

**Ingress Protection Rating:** IP54

**Operating Humidity Range (% RH):** 5 to 95% RH, non-condensing

**Ambient Temperature Range:** -5 F to +140 F (-20 C to +60 C)

**Storage Temperature Range:** -22 F to +176 F (-30 C to +80 C)

**Weight:** 1 lb (0.45 kg)

**Approvals:**
- CE: 89/336/ECC, 73/23/EEC
- C-Tick: N314
- Underwriters Laboratories Inc. UL873, Plenum Rated
- Underwriters’ Laboratories of Canada: cUL C22.2 No. 24-93

**Includes:** Mounting bracket, screws, shaft adapter, water-tight strain-relief cable fittings

**Comments:** Integral 1/2 in. NPSM conduit connection.

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Control Signal</th>
<th>Feedback</th>
<th>Nominal Driving @ 60 Hz</th>
<th>Power Consumption</th>
<th>Supply Voltage</th>
<th>Number of Internal Auxiliary Switch</th>
<th>Switch Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>* MN6105A1011</td>
<td>Floating; Two position</td>
<td>—</td>
<td>95 sec</td>
<td>5 VA</td>
<td>24 Vac +20%, -15%, 24 Vdc</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>* MN6105A1201</td>
<td>Floating; Two position</td>
<td>—</td>
<td>95 sec</td>
<td>5 VA</td>
<td>24 Vac +20%, -15%, 24 Vdc</td>
<td>2</td>
<td>30 Vdc max., 3 A Class II</td>
</tr>
<tr>
<td>* MN7505A2001</td>
<td>(0)2-10 Vdc (4-20 mA w/500 ohm resistor); Floating; Two position</td>
<td>(0)2-10 Vdc (max. output: ±1.0 mA)</td>
<td>95 sec</td>
<td>5 VA</td>
<td>24 Vac +20%, -15%, 24 Vdc</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>* MN7505A2209</td>
<td>(0)2-10 Vdc (4-20 mA w/500 ohm resistor); Floating; Two position</td>
<td>(0)2-10 Vdc (max. output: ±1.0 mA)</td>
<td>95 sec</td>
<td>5 VA</td>
<td>24 Vac +20%, -15%, 24 Vdc</td>
<td>2</td>
<td>30 Vdc max., 3 A Class II</td>
</tr>
</tbody>
</table>

*TRADELINE models *SUPER TRADELINE models
Wiring for Floating Control

MN6105, MN6110

FLOATING: DIR

ACTUATOR

24 VAC

LINE VOLTAGE POWER SUPPLY.
PROVIDE DISCONNECT MEANS AND
OVERLOAD PROTECTION AS REQUIRED.

24 VDC SUPPLY ACCEPTABLE.

Wiring for Voltage Control

MN7505, MN7510

MODULATING: 0[2]... 10 V, 10... 0[2] V

ACTUATOR

24 VAC

LINE VOLTAGE POWER SUPPLY.
PROVIDE DISCONNECT MEANS AND
OVERLOAD PROTECTION AS REQUIRED.

24 VDC SUPPLY ACCEPTABLE.

Wiring for Auxiliary Switches

END SWITCHES (CLASS II-ONLY)

S1 S2 S3 S4 S5 S6