Direct Coupled Damper Actuators—Non-Spring Return

N20 Series: MN6120; MN7220
Non-Spring Return Direct Coupled Actuator, 175 lb-in

These direct-coupled damper actuators provide adjustable modulating control for: air dampers, VAV units, air handling units, ventilation flaps, louvers, and reliable control for air damper applications with up to 4.6 m²/50 sq ft (seal-less dampers; air friction-dependent).

- Control for air damper applications with up to 50 sq ft assuming 3.5 in-lb per sq ft of damper area, velocity independent.
- Patented 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.
- CE approved. UL approved.

Actuator Type: Damper; Valve
Rotational Stroke: 95 ±3 degrees
Fail Safe Mode: Non-Spring Return
Torque: 175 lb-in. (20 Nm)
External Auxiliary Switches Available: Yes, SW2-US
Electrical Connections: Enclosed screw terminal strip (22 to 14 AWG)
Environmental Rating: NEMA2; IP54
Frequency: 50 Hz; 60 Hz
Manual operation: Declutch mechanism
Mounting: Direct Coupled
Maximum Noise Rating, Driving (dBA @ 1m): 40
Rotation to Open: By switch
Rotational Stroke Adjustment: Dual Integral Adj. Stops (3 degree increments)
Compatible Damper Shafts: 3/8 to 1.06 round or 3/8 to 11/16 square (10 to 27 round or 10 to 18 square)
Shaft Adapter Type: Self-centering clamping
Materials: Plenum rated plastic housing
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: -40 F to +175 F (-40 C to +80 C)
Weight: 3.2 lb (1.45 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, self-centering shaft adapter
Comments: Integral 1/2 in. NPSM conduit connection.

Dimensions in inches (millimeters)

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Control Signal</th>
<th>Feedback</th>
<th>Timing (seconds)</th>
<th>Power Consumption</th>
<th>Input Impedance</th>
<th>Number of Internal Auxiliary Switch</th>
<th>Switch Ratings</th>
<th>Maximum Stall Torque</th>
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<tbody>
<tr>
<td>* MN6120A1002</td>
<td>Floating; Two position</td>
<td>—</td>
<td>95 sec</td>
<td>6 VA, 6 W</td>
<td>24 Vac ±15%</td>
<td>—</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>* MN6120A1200</td>
<td>Floating; Two position</td>
<td>—</td>
<td>95 sec</td>
<td>6 VA, 6 W</td>
<td>24 Vac ±15%</td>
<td>—</td>
<td>2</td>
<td>250 Vac, 5 A res (3 A ind)</td>
</tr>
<tr>
<td>* MN7220A2007</td>
<td>(0)2-10 Vdc (4-20 mA w/500 ohm resistor)</td>
<td>(0)2-10 Vdc (max. output: ±1.0 mA)</td>
<td>95 sec</td>
<td>6 VA, 6 W</td>
<td>24 Vac ±20%</td>
<td>100K ohm (voltage), 500 ohm (current)</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>* MN7220A2205</td>
<td>(0)2-10 Vdc (4-20 mA w/500 ohm resistor)</td>
<td>(0)2-10 Vdc (max. output: ±1.0 mA)</td>
<td>95 sec</td>
<td>6 VA, 6 W</td>
<td>24 Vac ±20%</td>
<td>100K ohm (voltage), 500 ohm (current)</td>
<td>2</td>
<td>250 Vac, 5 A res (3 A ind)</td>
</tr>
</tbody>
</table>

*TRADELINE models  * SUPER TRADELINE models
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Used for On/Off Control

Wiring for Floating Control

Wiring for Modulating Control

Wiring for Auxiliary Switches