MN6110, MN7510 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.

FEATURES
• 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.
• UL listed.

SPECIFICATIONS

Torque Ratings:
• 88 lb-in. (10 Nm).

Electrical Ratings:
• See Table 1.

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.
• Input Impedance: 95K ohms minimum for MN7510.
• Feedback Signal: 0 or 2-10 Vdc for MN7510.
• Driving Current: 3 mA minimum for MN7510.

Timing (At Rated Torque and Voltage):
• Drive Open (typical): 90 seconds.

Temperature Ratings:
• Ambient: -5°F to 140°F (-20°C to 60°C).
• Shipping and Storage: -22°F to 176°F (-30°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.

End Switches (Two SPDT):
• Settings (fixed): 5° nominal stroke, 85° nominal stroke.
• Class II circuits only.

Dimensions:
• See Fig. 1.

Device Weight:
• 1 lb (0.45 kg).
Non-spring return actuators shall be direct coupled type requiring neither crankarm nor linkage and be capable of direct mounting to a damper shaft of up to 1/2 in. diameter. The actuator shall connect directly to the damper shaft using a removable output hub 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 (with the use of a 500 ohm shunting resistor) input signal. Proportional control models provide a 0-10 Vdc or 2-10 Vdc feedback signal. Actuators shall provide wiring terminals located within an integral access cover with conduit connections. Actuators shall have a rotation direction control switch accessible on the cover. Actuator shall have electronically controlled overload protection at all angles of rotation providing an absolute limit to the output torque.

Actuators shall be designed 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 1. Electrical Ratings.

<table>
<thead>
<tr>
<th>Model(s)</th>
<th>Power Input</th>
<th>Power Consumption (VA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voltage</td>
<td>Frequency</td>
</tr>
<tr>
<td>MN7510 Modulating</td>
<td>24 Vac/dc, -15%, +20%</td>
<td>50/60 Hz.</td>
</tr>
<tr>
<td>MN6110 Floating</td>
<td>24 Vac/dc, -15%, +20%</td>
<td>50/60 Hz.</td>
</tr>
</tbody>
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