Repeat Cycle Timer

Operation
The repeat cycle timer is a compact module that extends the operating time of AC actuators by pulsing the motor on and off. Extending the cycle time of an actuator can avoid problems associated with water hammer and control system instabilities.

The repeat cycle timer only has two connections and can be easily added to new or existing installations. The unit is merely connected in-line with one of the motor wires, as shown in the wiring diagram below, using the two position screw terminal on the unit. An on-board fuse limits the load current to 6.3A at 140°F.

Connecting the repeat cycle timer in series with the open wire will allow the unit to only control the open cycle time. Alternatively, the unit can be connected to the close wire to control the close cycle time only, or a second repeat cycle timer could be connected to the closed wire to separately control the close and open cycles. The standard configuration is set up with a single repeat cycle timer connected to the motor neutral wire that controls the closed and open cycles equally.

The on time is adjustable from 0.1 to 2 seconds, and the off time is adjustable from 0.5 to 10 seconds. The on board LED indicator aids in setting the on/off times by turning on and off with the load. The repeat cycle timer draws power from a small trickle current through the motor while it is off.

The repeat cycle timer is available for various power sources (50/60 Hz) and has a minimum motor load requirement due to its trickle current. The minimum load required for 117 vac + or - 10%, 0.2A minimum load.

Standard Voltage 120 vac

<table>
<thead>
<tr>
<th>Terminal Strip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#11</td>
<td>Open Limit Switch</td>
</tr>
<tr>
<td>#5</td>
<td>Neutral Power Load</td>
</tr>
<tr>
<td>#12</td>
<td>Closed Limit Switch</td>
</tr>
</tbody>
</table>

The encapsulated enclosure with wrap around bracket makes it rugged and easy to mount to the mid-section of the Series 41 actuators using the two mounting legs located on the back side of the unit.

Repeat cycle timers that are ordered with valve assemblies will be calibrated to the requested cycle time before shipment.
Calibration

*Cycle Timers speed is pre-calibrated to customer specifications.*

*Increase Speed:* To make the actuator cycle faster, turn the “ON” pot clockwise “Slightly”. This allows the actuator to stay on for longer periods, thus speeding up the 90° rotation.

*Decrease Speed:* To make the actuator cycle slower, turn the “ON” pot counter clockwise “Slightly”. This allows the actuator to stay on for shorter periods, thus slowing up the 90° rotation.

*Note:* The “ON” time should be greater than ½ second. If the “On” time is less, damage from over pulsing the motor could result.