INSTRUCTIONS
Series 83A Electric Actuator
12/24 VAC Service
“ELECTROMNI”

Description

1. **Valves**
Corrosion Resistant Thermoplastic uni-body construction ball valve in PVC or CPVC with Teflon seats and EPDM or Viton Backing Cushions and EPDM or Viton stem seal. Also available for our Tru-Union Type-21 ball valves and Tru-Union Type-23 Multi-Port 3-way ball valves.

2. **Motor**
The Series 83 “Electromni” motor is a DC gear motor with a set of Diodes in lead wires for AC low voltage operation, which opens and closes the omni or Type-21 ball valve in approximately 5 seconds through 90-degrees of travel. Type-23 Multi-port 3-way ball valves run 10 seconds for 180-degrees of travel.

3. **Operation**
Travel is controlled by 2 internal single pole double throw limit switches activated by individual cams located on top of motor with positive and negative lobes. (180-degrees for 3-ways)

4. **Adjustment**
The Actuator limit switches are fully adjustable for fine tuning the open and close positions. The cams are negative lobe cams. The adjustment can be achieved by loosening the set screws that secure the cams to the motor shaft and by rotating the cams ahead to trip the switch later or slightly back to trip the switch sooner. To see if change is valid look inside the valve itself and watch the ball travel.

Engineering Data

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>Voltage</th>
<th>Current Draw</th>
<th>Cycle Time</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2”-2”</td>
<td>12 VAC</td>
<td>2.25 AMPS</td>
<td>5 sec.</td>
<td>75%</td>
</tr>
<tr>
<td>1/2”-2”</td>
<td>24 VAC</td>
<td>4.0 AMPS</td>
<td>5 sec.</td>
<td>75%</td>
</tr>
</tbody>
</table>

Standard enclosure is weather/corrosion resistant (NEMA 4X).

**Options:**
- 1 additional limit switch (Dry set of contacts)
- 2-position indicating lights (For visual position indication)
- 2-wire control (For Retrofitting Solenoids must provide constant voltage)

**Attachments:** 3-Drawings #0003EL, #0119BV83, #0046BV83, #132BV83.
WIRING DIAGRAM:

**ELECTROMMI**

**CUSTOMER PROVIDED WIRING, SWITCH AND OPTIONAL LIGHTS.**

**WHITE** = NEUTRAL
**BLACK** = HOT COMMAND OPEN
**RED** = HOT COMMAND CLOSE
**GREEN** = GROUND

**LINE VOLTAGE**

**FOR REFERENCE ONLY**

ASAHI/AMERICA

ISO 9001 CERTIFIED

35 GREEN STREET, P.O. BOX 653, MALDEN, MA.

ELECTROMMI WIRING DIAGRAM
12/24 VAC

<table>
<thead>
<tr>
<th>NAME</th>
<th>DATE</th>
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</thead>
<tbody>
<tr>
<td>DR</td>
<td>JJG</td>
</tr>
<tr>
<td>APPD</td>
<td>K.BLYSTONE</td>
</tr>
<tr>
<td>PROD</td>
<td>E.HURLEY</td>
</tr>
<tr>
<td>W0#/S0#</td>
<td>0003EL</td>
</tr>
<tr>
<td>FILE</td>
<td></td>
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</tbody>
</table>

SCALE NTS
SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
MACHINING
2 PL DECIMALS ± .01
3 PL DECIMALS ± .005
ANGULAR ± 1/2°
FRACTIONAL ± 1/64
FABRICATION
1/2" - 8" ± 1/4
10" AND UP ± 1/2
ANGULAR ± 1.0°

TOLERANCES:
MACHINING
ANGULAR ± 1.0°
10" AND UP ± 1/2
FABRICATION
1/2" - 8" ± 1/4
10" AND UP ± 1/2

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FINISH:
3 PL DECIMALS ± .005
2 PL DECIMALS ± .01

NOTE: The shape and appearance of assembly differ a little with nominal size.

ITEM | DESCRIPTION | MATERIAL | QTY
--- | --- | --- | ---
1 | OMNI BALL VALVE | PVC, CPVC, PP, PVDF | 1
2 | ELECTROMNI ACTUATOR | ABS & PVC | 1
3 | COUPLING | 303 STAINLESS STEEL | 1
4 | ALLEN SET SCREW | STAINLESS STEEL | 2

1/2" THRU 2" OMNI BALL VALVE ELECTROMNI

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1 - ELECTRONINI (SERIES 83) ACTUATOR IS AVAILABLE IN 110 VAC, 220 VAC, 24 VAC, 12 VAC, 24 VDC, AND 12 VDC MODELS

ITEM | DESCRIPTION | MATERIAL | QTY
--- | --- | --- | ---
1 | T-21 BALL VALVE | PVC, CPVC, PP, PVDF | 1
2 | ELECTRONINI ACTUATOR | ABS & PVC | 1
3 | COUPLING | 303 STAINLESS STEEL | 1
4 | BOLT | STAINLESS STEEL | 4
5 | FLAT WASHER | STAINLESS STEEL | 4

1/2" T-21 BALL VALVE TO SERIES 83 ACTUATOR

**PVC/CPVC/SOCKET/THREAD FOR FLANGED/OTHER SEE CATALOG**
NOTE: The shape and appearance of assembly differ a little with nominal size.