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Tonhe A100-T Series
MOTORIZED SS304 BALL VALVE

Technical Parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product size</strong></td>
<td>NPT/BSP 1-1/4&quot; 1-1/2&quot; 2&quot; (2-way valve)</td>
</tr>
<tr>
<td></td>
<td>NPT/BSP 1/2&quot; 3/4&quot; 1&quot; (3-way valve) (Optional)</td>
</tr>
<tr>
<td>Maximum working pressure</td>
<td>1.0 MPa</td>
</tr>
<tr>
<td>Circulation medium</td>
<td>Fluid, air</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>DC12V  DC24V  AC/DC9-35V  AC110-230V (Optional)</td>
</tr>
<tr>
<td>Wiring control methods</td>
<td>□CR2-01  □CR2 02  □CR3-03  □CR4-01  □CR5-01  □CR5-02 (Optional)</td>
</tr>
<tr>
<td>Working current</td>
<td>≤A</td>
</tr>
<tr>
<td>Open/close time</td>
<td>≤15S</td>
</tr>
<tr>
<td>Life time</td>
<td>70000 times</td>
</tr>
<tr>
<td>Valve Body material</td>
<td>304 Stainless steel</td>
</tr>
<tr>
<td>Actuator material</td>
<td>Engineering Plastics</td>
</tr>
<tr>
<td>Sealing material</td>
<td>FKM &amp; PTFE</td>
</tr>
<tr>
<td>Actuator rotation</td>
<td>90°</td>
</tr>
<tr>
<td>Max. torque force</td>
<td>10N.M</td>
</tr>
<tr>
<td>Cable Length</td>
<td>0.5m</td>
</tr>
<tr>
<td>Environment temperature</td>
<td>-15°C ~ 50°C</td>
</tr>
<tr>
<td>Liquid temperature</td>
<td>2°C ~ 120°C</td>
</tr>
<tr>
<td>Manual override</td>
<td>No</td>
</tr>
<tr>
<td>Indicator</td>
<td>Yes</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP67</td>
</tr>
<tr>
<td>Certificate</td>
<td>CE(LVD EMC), ROHS, NSF61-G</td>
</tr>
<tr>
<td>Company passed</td>
<td>ISO9001:2015</td>
</tr>
</tbody>
</table>
Wiring diagram

CR2 01 Wiring Diagram (2 wires control)

- RD connect with positive, the BK connect with negative, the valve closed, the actuator automatically power off after in place, the valve remains fully closed position.
- BK connect with positive, the RD connect with negative, the valve open, the actuator automatically power off after in place, the valve remains fully open position.
  * Suitable Working Voltage: **DC12V, DC24V**
  * Exceeding the working voltage is forbidden

CR2 02 Wiring Diagram (2 wires control – “Spring return” in case of the power is failure)

- When SW is closed, the valve open, the actuator automatically power off after in place
- When SW is open, the valve closed, the actuator automatically power off after in place
  * Suitable Working Voltage: **AC/DC9-35V, AC110V-230V**
  * Exceeding the working voltage is forbidden

Please Note A100 CR2 02 must need charge time >1 min for every time use

CR3 03 Wiring Diagram (3 wires control)

- RD connect with positive, GR connect with SW & positive
- BK connect with negative
- When the SW of GR closed, the valve OPEN, the actuator automatically power off after in place, remains fully closed position
- When the SW of GR open, the valve CLOSED, the actuator automatically power off after in place, remains fully open position.
  * Suitable Working Voltage: **AC/DC12V, AC/DC24V, AC110-230v**

CR4 01 Wiring Diagram (4 wires control)
1. RD & BK are connected to the power, GY & GR are connected to the controlled wiring.

2. When the SW is closed, the valve open

3. When the SW is open, the valve closed

Suitable Working Voltage: AC110V-230V

Exceeding the working voltage is forbidden

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**CR5 01 Wiring diagram (with feedback signal)**

1. RD connect with positive, the BK connect with negative. the valve closed, the actuator automatically power off after in place.

2. BK connect with positive, the RD connect with negative. the valve open, the actuator automatically power off after in place.

3. GR & WT are connect when the valve open fully, YW & WT are connect when the valve closed fully

Suitable Working Voltage: DC12V, DC24V

Exceeding the working voltage is forbidden

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**CR5 02 Wiring diagram (with feedback signal)**

1. When SW is closed, the valve open. the actuator automatically power off after in place

2. When SW is open, the valve closed, the actuator automatically power off after in place
* GR & WT are connect when the valve open fully, YW & WT are connect when the valve closed fully

* Suitable Working Voltage: AC/DC9-35V, AC110V-230V

* Exceeding the working voltage is forbidden

**CR7 03 Wiring Diagram (7 wires control with feedback signal)**

![Wiring Diagram](image)

- RD & GR connect with positive, the BK connect with negative.
- SW CLOSED, the valve OPEN, the actuator automatically power off after in place
- SW OPEN, the valve CLOSED, the actuator automatically power off after in place.
- BL & GY connect with the valve’s fully open signal wiring
- YW & WT connect with the valve’s fully closed signal wiring.

* Suitable Working Voltage: AC/DC12V, AC/DC24V

* Exceeding the working voltage is forbidden

**Feedback wire capacity:**
1. maximum voltage DC36V, AC220V; 2. maximum current 0.4 A.

**CR7 04 Wiring Diagram (7 wires control with feedback signal)**

![Wiring Diagram](image)

- RD & BK are connected to the power, GR & BL are connected to the controlled wiring.
- When the SW is closed, the valve open
- When the SW is open, the valve closed
- GR & WT connect with the valve’s fully open signal wiring
- YW & WT connect with the valve’s fully closed signal wiring.

* Suitable Working Voltage: AC110V-230V

* Exceeding the working voltage is forbidden