BERMAD Irrigation

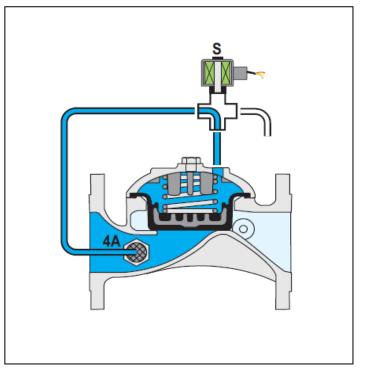
IOM IR-410-X

Solenoid Control Valve

(Sizes 1.5''- 4"; DN40-100)

Description:

The BERMAD Solenoid Controlled Valve is a hydraulically Operated, diaphragm actuated control valve that opens and Shuts in response to an electric signal.



Installation:

- 1. Ensure enough space around the valve assembly for future maintenance and adjustments.
- 2. Prior to valve installation, flush the pipeline to insure flow of clean fluid through the valve.
- 3. For future maintenance, install Isolation gate valves upstream and downstream from Bermad control valve.
- 4. Install the valve in the pipeline with the valve flow direction arrow in the actual flow direction.
- 5. For best performance, it is recommended to install the valve horizontally and upright.
- 6. After installation carefully inspect/correct any damaged accessories, piping, tubing, or fittings.
- 7. Cross-Check solenoid specifications with design requirements and solenoid/coil label.
- 8. Ensure approved cable protection. Confirm that the wires data meet solenoid specifications.

Note: Energizing the solenoid coil when it is not fixed in its place, is dangerous and might burn the coil.

Commissioning & Calibration:

- 1. Confirm that the valve installed in the flow direction.
- 2. Allow the valve to open by using the solenoid manual override or by: Operating the solenoid.
- 3. Open fully the upstream isolating valve and slowly open the downstream isolating valve, to fill-up, carefully, the consumers' line downstream from the Valve.
- 4. Check valve solenoid control feature by De-Energizing & Energizing the solenoid to close & open the valve.



Trouble-Shooting:

| Symptoms | Cause | Remedy | |
|---------------------|-----------------------------------|--|--|
| Valva faila ta anan | 1. Not sufficient inlet pressure. | 1. Check for sufficient inlet pressure. | |
| Valve fails to open | 2. Not sufficient flow. | 2. Create demand/flow, confirm pilot setting- | |
| | 3. Solenoid functioning | 3. Check solenoid power supply, coil & Manual Override Handle position | |
| | 1. Control circuit is clogged. | 1. Check for any debris trapped in the valve control circuit. | |
| | 2. Debris . | 2. Check for any debris trapped in the valve body. | |
| Valve fails to | 3. Diaphragm . | 3. Check diaphragm is not leaking- | |
| close | 4. Solenoid functioning | 4. Check solenoid power supply, coil & Manual Override Handle position | |
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Preventive Maintenance:

- 1. System operating conditions that effect on the valve should be checked periodically to determent the required preventative maintenance schedule.
- 2. Maintenance instructions:
 - 2.1. Tools required:
 - 2.1.1. Metric and imperial wrenches
 - 2.1.2. Anti-seize grease
 - 2.1.3. Visual inspection to locate leaks and external damages
 - 2.2. Functional inspection including: closing, opening and regulation.
 - 2.3. Close upstream and downstream isolating valves (and external operating pressure when used)
 - 2.4. Once the valve is fully isolated vent pressure by loosening a plug or a fitting.
 - 2.5. Open the screw nuts and remove the cover unit from the valve body. Disassemble necessary control tubs.
 - 2.6. It is highly recommended to stock a reserve parts assembly for each size. This allows minimum system field work. And system down time.
 - 2.7. Disassemble the cover and examine the inside parts carefully for signs of wear, corrosion, or any other abnormal conditions.
 - 2.8. Replace worn parts and all the Elastomers. Lubricate the bolts and screws threads with Anti seize grease.
 - 2.9. Winterizing /freezing prevention: drain the valve & the valve accessories (pilot, solenoid) on time.

Spare Parts

Bermad has a convenient and easy to use ordering guide for valve spare-parts and control system components. For solenoid valves refer to model and S/N on solenoid tags.

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