

Valve Automation

StoneL

The Axiom



MODBUS

DeviceNet



HART
COMMUNICATION PROTOCOL



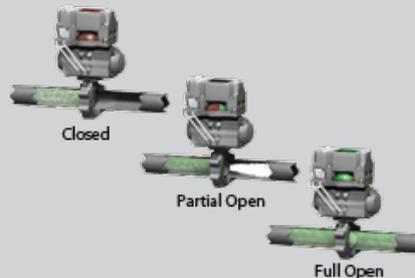
The Axiom (AMI) is a discrete valve communication and control device for quarter-turn automated valves (patent pending.) Its advanced position sensor offers reliable long life performance with push-button settings that may be made quickly and conveniently. The integral pneumatic pilot valve offers contemporary features which further enhance the operating performance of your automated valve system. The Axiom's rugged construction will withstand your most challenging plant environments.

Fill Control

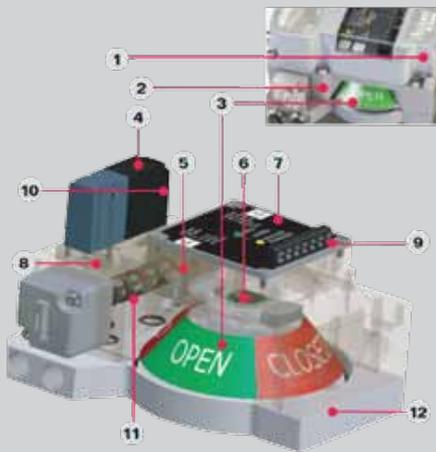


Fill tanks and hoppers rapidly and accurately. You can set the AXIOM Expeditor to partially close the valve to reduce flow as the full level approaches. You get fast, economical "topping off" of every batch with a single valve sized for high flow rates, which may be throttled back at the end of the fill cycle.

Thermal Shock Reduction



By partially opening a standard discrete valve, steam lines are heated gradually; thus preventing thermal shock. Once lines are heated, full opening may occur minimizing any potential damage to steam lines. This is especially critical in CIP (clean in-place) and SIP (steam-in-place) applications.



1. The Axiom is corrosion proof, temporarily submersible and suitable for use in Hazardous areas. Designed for NEMA 4, 4X & 6; (IP67) Class I & II Div 2 Nonincendive (Ex nA) and Class I & II Div 1 and 2 (Ex ia) Intrinsically Safe.
2. High strength durable enclosure and pneumatic manifold are constructed of anodized aluminum and epoxy coated. Impact resistant cover is made of high strength Lexan polycarbonate. All fasteners are stainless steel.
3. High visibility mechanical and electronic indication confirm OPEN/CLOSED position and solenoid status for greater safety and convenience.
4. Universal burn out proof solenoid operates on less than 0.6 watts of power and standard version will accept either 24VDC or 120VAC, reducing stocking requirements.
5. Electronic sensing, switching and communication components are sealed and potted inside function module to protect against residual moisture, vibration and corrosives.
6. High accuracy position sensor system is solid state with no moving wear points for highly reliable and precise position feedback.
7. Push button set points for Open & Closed accurately lock in position settings. Settings remain locked in when power is removed and reapplied.
8. Integral pneumatic valve operates on standard plant air and will cycle most actuators in less than 2 seconds.
9. Wiring and maintenance access is quick and convenient for easy set-up and installation.
10. Internal manual pneumatic valve override is standard enabling local automated valve operation.
11. Standard five way, two position valve operates both double and single-acting actuators and features re-breather to feed instrument air into spring side of actuator to keep out corrosives.
12. Axiom directly attaches to VDI/VDE 3845 (Namur) sizes 1 & 2 actuator accessory patterns and may be readily adapted for other actuator applications.

Valve Automation



Other Specifications and Ratings

Materials of Construction and Ratings

| | |
|-------------------------------|---------------------------------|
| Housing & Manifold | Epoxy coated anodized aluminium |
| Mounting | aluminium |
| Cover & Visual Indicator | Lexan polycarbonate |
| Fasteners & Mounting Adaptors | Stainless Steel |

Temperature Rating (pneumatic valve dependant)

| | |
|------------------------------|-----------------------------|
| Pieza Pilots (_A) | -10° to 60°C (14° to 140°F) |
| Solenoid Pilots (_D, _E, _H) | -18° to 50°C (0° to 122°F) |

Position Sensor System

| | |
|----------------|---|
| Accuracy | Within 1° |
| Repeatability | Within 1° |
| Setting Buffer | 4° from set point Rotational distance from original set point where switch will energize on return |

| | |
|-----------|--|
| Dead Band | 6° from set point Rotational distance from original set point where switch will de-energize |
|-----------|--|

| | |
|--------------------------|------|
| Maximum Rotational Range | 120° |
|--------------------------|------|

Operating Life

| | |
|-----------------|------------------|
| Pneumatic Valve | 1 Million Cycles |
|-----------------|------------------|

Warranty

| | |
|-----------------------|---------|
| Mechanical Components | 2 Years |
| Electronic Components | 5 Years |

Nonincendive Ratings

| | |
|---------|--|
| NEC/CEC | Class I, Groups A, B, C & D, Div.2 Class II, Groups F & G, Div. 2 |
| IEC | Ex nA, nC IIC T5, Zone 2 |

Intrinsically Safe Ratings

| | |
|---------|--|
| NEC/CEC | Class I, Groups A, B, C & D, Div.1 & 2 Class II, Groups E, F & G, Div.1 & 2 |
| IEC | Ex ia IIC T5, Zones 0, 1 & 2 |

Enclosure Protection

| | |
|---------|-----------|
| NEC/CEC | 4, 4X & 6 |
| IEC | IP67 |



Enclosure option "A" for North America (NEC/CEC)



Enclosure option "V" for International (IEC)

Dimensions

Inches [mm]

