



PRODUCT SPECIFICATIONS

Resin Aviator™ Integrated Valve Controller

FCD AXENPS0012-01 – 05/06

Introduction:

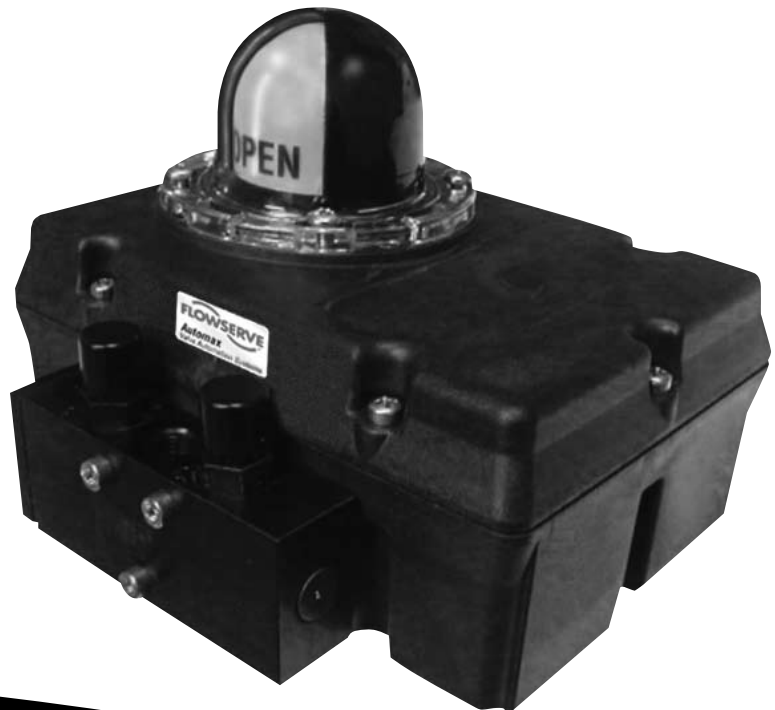
The WR and FR-Series Resin Aviator™ Integrated Valve Controller combines an internal solenoid pilot, an external high capacity spool valve, and a pair of position indicating limit switches in one enclosure for maximum corrosion protection. It meets CSA and cCSAus, Nema 4, and 4x waterproof standards. The integral switches and solenoid are pre-wired to screw terminal connectors for easy external wiring. The Resin Aviator™ housing includes one standard ½" NPT conduit connection for field wiring. Housings have been designed for easy upgrade to fieldbus communication protocols simply by changing circuit boards and shaft assemblies.

Applications:

The Resin Aviator™ package is designed to meet corrosive hazardous location valve control and position signaling needs. Switch options are available to meet a wide range of electrical specifications. Solenoid options include 3- and 4-way configurations, with standard 120 VAC, 220 VAC, 12 VDC, 24 VDC 2 Watt coils and other low-power coil options available. The WR-Series has Class 1, Div. 2 hazardous location approvals when specified with hermetically-sealed proximity switches. The FR-Series in FOUNDATION Fieldbus (F2 Protocol only) is available with Class 1, Div. 1, Groups A-G and ATEX EEx ia IIC T4 intrinsically safe approvals.

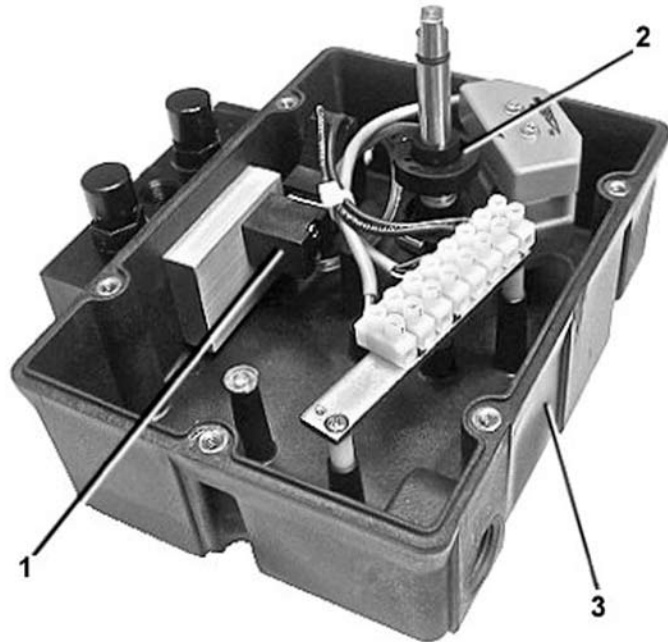
Durable construction and corrosion resistant materials and coatings provide protection against the toughest applications in all process industries, including:

1. Chemical and Petrochemical
2. Power
3. Food and Beverage
4. Pharmaceutical
5. Municipal and Waste Water



Features:

1. **Internal Pilot Solenoid Coil** contains and protects the coil within the Resin Aviator™ housing. This feature allows for secure operation in hazardous environments, eliminates expensive conduit and fittings, simplifies wiring, and reduces the time and expense of installation. This feature also offers a high degree of solenoid coil protection in difficult “wash down” applications.
2. **Compact, High 1.8 Cv Spool Valve.** The spool is internally-vented to prevent the ingress of corrosive atmospheres. Available in anodized aluminum and 316 stainless steel construction with optional momentary and locking manual overrides.
3. **Quick-Set Cams.** Tool free adjustment of switch trip point is accomplished simply by pushing or pulling the cam and rotating it to the new trip point position. Cams are spring-loaded and splined to maintain switch settings in any installed position. They are fully adjustable through 360° in 4° increments.
4. **Corrosion Resistant Materials.** All exposed parts are either stainless steel, anodized aluminum, or glass-reinforced engineered resin to enhance protection in the harshest corrosive environments.
5. **Captive Cover Screws** permit calibration without potential for losing screws.
6. **UltraDome™ Visual Position Indicator** provides adjustable, high-contrast, full angle viewing of valve position.
7. **Fieldbus upgradeable.** Fieldbus digital communications are a common requirement. The Resin Aviator™ housing has been designed to accommodate circuitry necessary to communicate with these systems and may be field-upgraded to expand the capabilities of installed units.



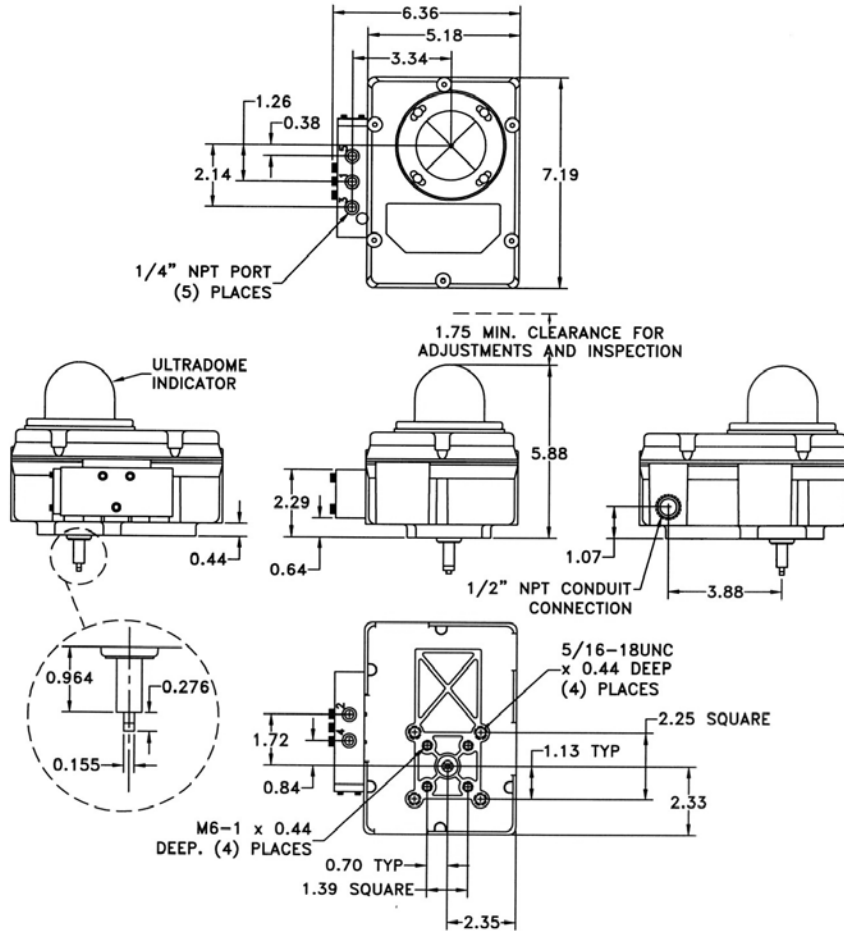
Materials of Construction:

PART	MATERIALS
Housing/Cover	Glass Reinforced Resin (General Electric Nonyl®)
Shaft	Stainless Steel
Cams/Splines	Nylon
UltraDome™ Dome and Rotor	Polycarbonate
Internal Brackets	Stainless Steel or Plated Carbon Steel
All Internal Fasteners	Stainless Steel or Plated Carbon Steel
All External Fasteners	Stainless Steel

Principles of Operation:

The Resin Aviator™ is designed for use with pneumatic rotary valve actuators in hazardous locations. It provides actuator/valve control by receiving a direct solenoid voltage signal. It also provides remote indication of open and closed valve positions by completing separate electrical circuits. Local visual indication is accomplished with the UltraDome™ rotary indicator.

Dimensions:



Enclosure Ratings:

Ingress Protection: NEMA 4/4x

WR-Series		FR-Series
Mechanical Switches	Proximity Switches	FOUNDATION Fieldbus (F2 protocol only)
Types M1 & MG	Types P1, P2, PP, PK, PL, PM, B4, BL, BK, BM Class I, Division 2, Group A, B, C, D Class II, Division 2, Group E, F, G Type/NEMA 4x	Intrinsically Safe Class 1, Div. 1, Group A, B, C, D, E, F, G ATEX EEx ia IIC T4 Nonincendive Class 1, Div. 2, Groups A, B, C, D

NOTE: When using hermetically sealed proximity switches in Division 2 hazardous locations, a conduit seal is not required.

Temperature Range:

Hazardous Locations:

T6: -13 to 133 Deg. F (-25 to 56 Deg. C)
T5: -13 to 160 Deg. F (-25 to 71 Deg. C)
T4A: -13 to 176 Deg. F (-25 to 80 Deg. C)

Agency Listings:



How to Order:

I. Model		IV. Coils	
WR		0	(1) Coil (Single Coil Operation)
FR (F2 FOUNDATION Fieldbus protocol only)		1	(2) Coils (Dual Coil Operation)
II. Indicators		V. Solenoid Coil	
U	UltraDome 2-Way	A	110 VAC (2-Watt)
C	90 Degree 3-Way	C	220 VAC (2-Watt)
D	180 Degree 3-Way	F	12 VDC (2-Watt)
E	180 Degree 3-Way Center Blocked	G	24 VDC (2-Watt)
F	120 Degree Thru/Divert	H	12 VDC (.67 Watt)
III. Switches		J	24 VDC (.67 Watt)
M1	(2) SPDT Mech. (NEMA 4/4X ONLY)	K	24 VDC IS (15.5 VDC, .67 Watt) Intrinsically Safe
MG	(2) SPDT Mech., Gold Contacts (NEMA 4/4X ONLY)	P	24 VDC Ultra-Low Power (.006 Watt)
R4	(2) SPST Proximity	VI. Spool Valve	
P1	(2) Sabre SPDT Proximity	1	3-Way Aluminum
PP	(2) Phazer II SPDT Proximity	2	3-Way Stainless Steel
PL	(2) Phazer II SPDT Proximity w/LED	3	4-Way Aluminum
B4	(2) Phazer II BRS SPDT Proximity	4	4-Way Aluminum
BL	(2) Phazer II BRS SPST Proximity w/LED	VII. Shaft Options	
S4	(2) P&F NJ2-V3-N (NAMUR)	P	Standard 1/4" Shaft
SE	(2) Efecor Type IN-2002-ABOA	N	NAMUR Shaft
F2	2-Wire Foundation Fieldbus (P coil option ONLY)	VIII. Spool Valve Options	
F4	4-Wire Foundation Fieldbus (24 VDC Coil)	R	Thermoplastic Rain Caps (Standard)
FA	AS-i (24 VDC Coil)	M	Thermoplastic Rain Caps with Momentary Manual Override
		L	Thermoplastic Rain Caps with Locking Manual Override

FCD AXENPS0012-01 Printed in USA.

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