

# Automax Aviator™

### Mechanical Installation

Installation is best performed with the NAMUR mounting kits. These kits allow direct mounting of the Aviator™ shaft to the actuator pinion without a coupler. The NAMUR mounting kits will work with any actuator conforming to the NAMUR standard for accessory mounting hole locations and pinion dimensions. Simply attach bracket to actuator and Aviator™ to bracket with the included fasteners. The Aviator™ shaft features an integral alignment pin which engages the tapped pinion hole. Automax also offers a full line of non-NAMUR kits.

### Electrical Connections

The Aviator™ features three (3) 1/2" NPT conduit entries. The switches and pilot solenoid are wired to a printed circuit board to simplify customer wiring connections. A wiring diagram is included under the lid. Simply make desired connections to the circuit board using the attached screw terminal blocks. Secure a grounding wire under the green grounding screw. Make sure the solenoid control voltage is the same as the solenoid electrical rating.

For hazardous locations, U.L. and National Electric codes require an approved sealing fitting within 18 inches of the switch enclosure. Sealing fittings are not required for Division 2 non-incendive applications. Open conduit entries must be closed after installation using a close-up plug approved for hazardous locations. Conduit and plugs must engage a full five (5) threads.

**Caution**  
To prevent ignition of hazardous atmospheres, keep cover bolts tight while circuits are live. Disconnect supply circuit before opening.

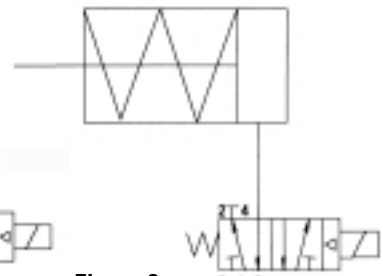
DEMKO 02 ATEX 130947 0518  
Flameproof: II 2 G EEx d IIB T4-T6  
  
DEMKO 02 ATEX 0218321  
Non-Incendive: II 3 G EEx nC II T4-T6  
  
Tamb = -25°C; T6 +55°C, T5 +70°C, T4 = 80°C

### Spool and Tubing Configuration

1. For spring return actuators, a 4-way spool valve is provided with port #2 plugged. For double acting actuators, the same valve is provided with no plugs. Make sure the correct spool is selected before installing tubing. (Note: the APS2 module can be supplied on spring return actuators to purge the spring chamber with supply air.)
2. Make sure all air pressure is removed before installing tubing.
3. Attach tubing according to Figures 1 or 2 below, depending upon application. Attach supply tubing to Port 1 and use 3 and 5 exhaust.
4. To prolong actuator life use only clean, dry plant air. Lubricated air is not required, although it is recommended particularly for high cycle applications.



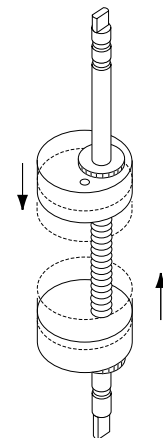
**Figure 1**  
DA Actuator



**Figure 2**  
SR Actuator

### Switch Setting

1. Rotate actuator to desired position.
2. Loosen five captive cover screws and remove lid, turning slightly while lifting.
3. To adjust the limits, lift or depress cam against spring to disengage splines and turn cam until switch activates / deactivates as desired (Figure 3).
4. Release cam, assuring that the splines are engaged.
5. Clean base and lid flanges and replace lid on base. Make sure wires are NOT caught between flanges, and tighten captive screws.



**Figure 3**  
Cam Adjustment

Flowserve Corporation  
Flow Control Division  
www.flowserve.com

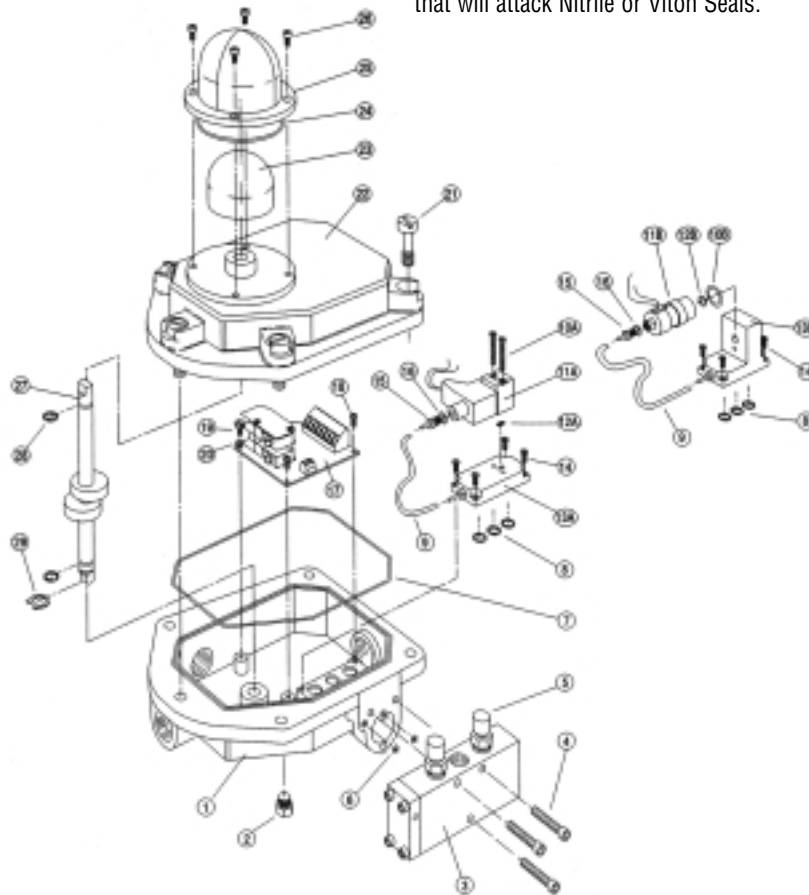
1350 N. Mountain Springs Parkway  
Springville, Utah 84663-3004  
Phone: 801 489 8611

1978 Foreman Dr.  
Cookeville, TN 38501  
Phone: 931 432 4021

### Lubrication

All Aviator™ spool valves are pre-lubricated and will operate dry (with no additional lubrication). The use of lubricated air will not interfere with the Aviator's functioning.

If air lubrication is used, the oils listed below are popular, easily obtainable fluids that are recommended for use with the Aviator™ Spool valve: Gulf Harmony 47, Mobil DTE Medium, Shell Tellus 29, Texaco Rondo B, Sohivis 47 and Sunnis 921. Many other lubricants are acceptable providing they do not contain detergents that will attack Nitrile or Viton Seals.



### Bill of Material

Item	Part #	Description	Qty.
1	XM0268	Housing Base	1
2	X00903	1/8" Muffler	1
3	X00878	Spool Valve	1
4	X00838	10-32 x 1 1/8 SHCS	3
5	1079352	Breather	2
6	X00892	O-Ring	2
7	X00814	O-Ring	1
8	X00779	O-Ring	3
9	X00837	1/8 x 2 Tubing	1
10A	Varies	2 Watt Solenoid Pilot	2
11A	100158	4-40 x 1 PHS	1
12A	X00893	O-Ring	1
13A	XM0276	Manifold Block	1
10B	Varies	.67 Watt Solenoid Pilot	1
11B	X00895	O-Ring	1
12B	X00894	O-Ring	1
13B	XM0292	Manifold Block	1

Item	Part #	Description	Qty.
14	100167	8-32 x 1/2 PHS	4
15	X00410	1/8" Tube Fittings	2
16	X00410G	Gasket	2
17	Varies	Switch Card	1
18	105915	#6-32 x 1/4 PHS	2
19	103627	Ground Screw	1
20	105626	Cup Washer	1
21	X00801	5/16-18 bolts	5
22	XM0269	Housing Cover	1
23	X00663	Rotor	1
24	X00677	O-Ring	1
25	X00662	Dome	1
26	X00676	#10-24 x 1/2 PHS	4
27	Varies	Shaft Assembly	1
28	103603	O-Ring	2
29	101810	Snap Ring	1