

# Moniteur

## **SERIES 40 ROTARY POSITIONER**

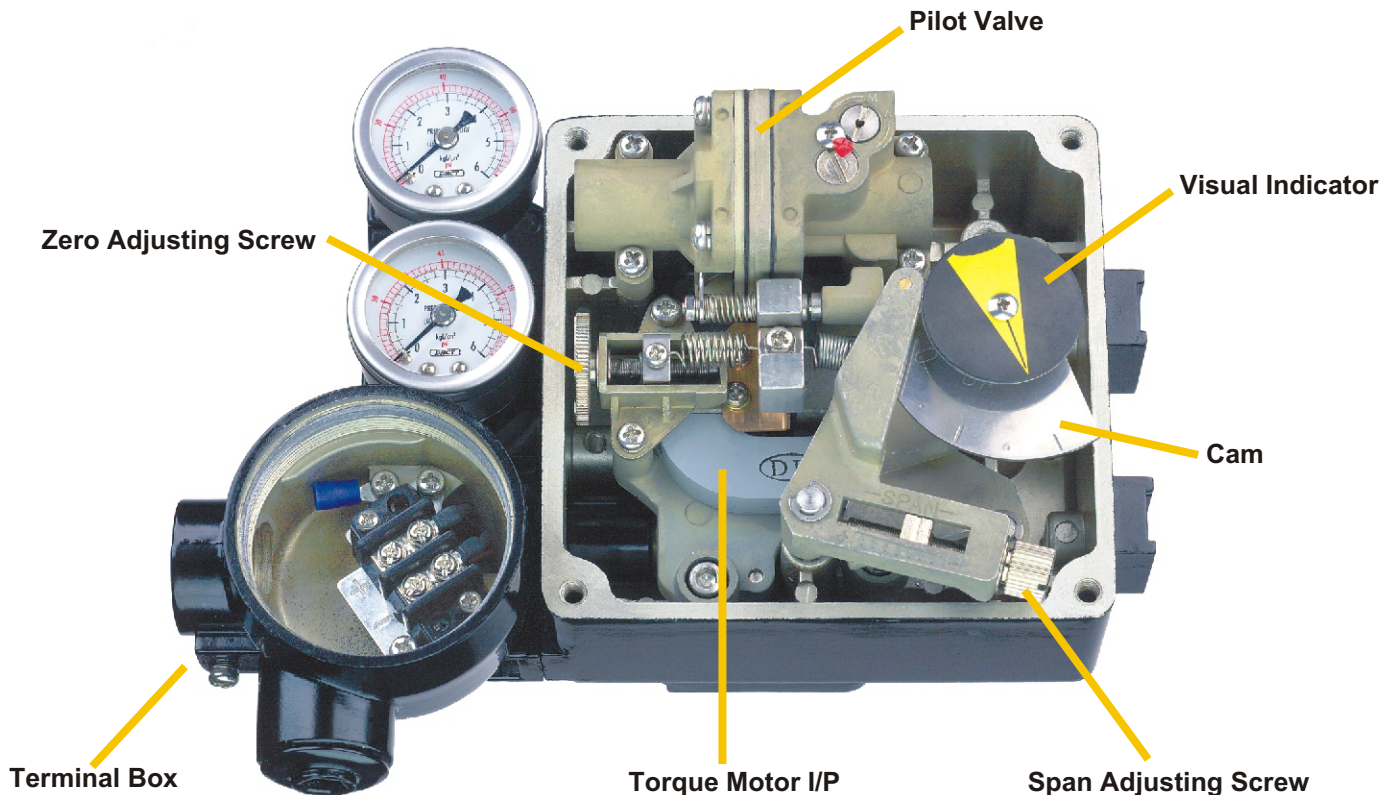
### ***A Solid Workhorse You Can Depend On For Consistent, Reliable Control***



Moniteur's Series 40 pneumatic (3-15psi) and electro-pneumatic (4-20mA) positioners are advanced control devices which provide unparalleled stability in difficult environments.

- **Rugged Aluminum Housing** with a triple corrosion-resistant interior and exterior coating stands up to harsh environments
- **Reduced Bleed Pilot Valve** reduces air consumption by more than 50%
- **No Spool Valves** are used for air delivery, improving resistance to dirty plant air
- **Unique Magnetic 4-20 mA I/P** automatically compensates for supply pressure, atmospheric pressure and ambient temperature changes, and is unaffected by EMF. The vibration resistant design has no resonance effects from 5-200Hz
- **Precise Calibration** with simple SPAN and ZERO adjustments.
- **Precision Zero-Hysteresis Coupling System** for NAMUR actuators provides superior accuracy and repeatability by eliminating "slop".
- **Stainless Steel Gauges Standard**
- **Optional Limit Switches and 4-20mA Feedback**
- **Each Positioner Performance Tested** - Test results included in the box with each positioner guarantee consistent performance.

***All Rugged, Metal Parts Inside***



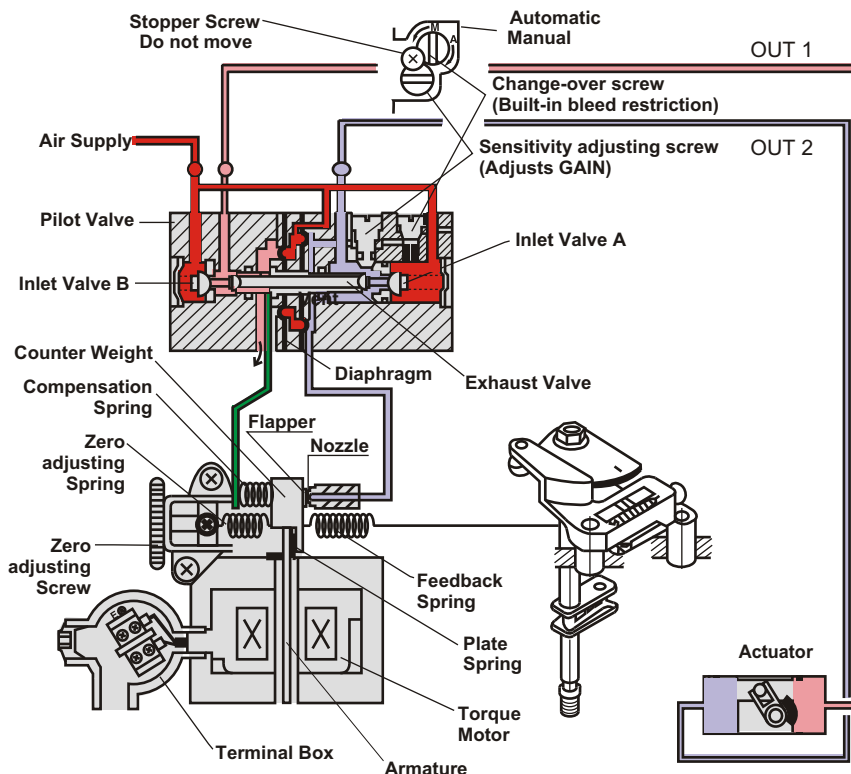
### Specifications - 3-15 psi Pneumatic

Input Signal	3 - 15 psig Split Range Available
Impedance	N/A
Stroke Range:	0 - 90°
Supply Range:	20 to 100 PSIG
Air Delivery:	7 SCFM
Air Consumption:	0.26 SCFM
Operating Temperature:	-4° to +158° F
Linearity	+/- 1%
Hysteresis	1% max.
Sensitivity	+/- 0.5%
Repeatability	+/- 0.5%
Pneumatic Connections:	1/8 NPT - Gauge Ports 1/4 NPT - Supply / Outlet
Enclosure:	Designed to NEMA 4, 4X
Enclosure Weight:	Approx. 4.8 lbs.

### Specifications - 4-20 mA Electro-Pneumatic

Input Signal	4 - 20 mA @ 24 VDC Split Range Standard
Impedance	250 +/- 15 ohms
Stroke Range:	0 - 90°
Supply Range:	20 to 100 PSIG
Air Delivery:	7 SCFM
Air Consumption:	0.15 SCFM
Operating Temperature:	-4° to +158° F
Linearity	+/- 1%
Hysteresis	1% max.
Sensitivity	+/- 0.5%
Repeatability	+/- 0.5%
Pneumatic Connections:	1/8 NPT - Gauge Ports 1/4 NPT - Supply / Outlet
Enclosure:	Designed to NEMA 4, 4X
Enclosure Weight:	Approx. 6.5 lbs.

### Principle Of Operation - Rotary Positioner



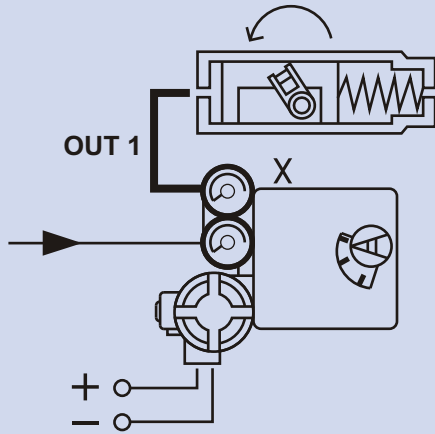
As the signal current from the controller increases, the plate spring of the torque motor works as a pivot. As the armature receives the rotary torque in the counter-clockwise direction, the counter-weight is pushed to the left, the clearance between the nozzle and the flapper will increase, and the nozzle back pressure will decrease. As a result, the exhaust valve of the pilot valve moves to the right, and the output pressure of OUT1 increases (as OUT 2 decreases) to move the actuator.

The movement of the actuator in turn rotates the feedback shaft and spring. The actuator stays in the position where the spring force is balanced with the force generated by the input current in the torque motor. The compensation spring is for direct feedback of the motion of the exhaust valve, and is connected to the counter weight to enhance the stability of the loop. The zero point is adjusted by changing the zero adjustment spring tension.

### **Piping Configurations - Rotary Positioner**

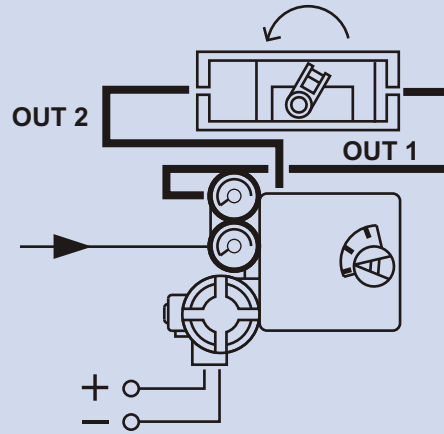
**Reverse Acting** - Actuator Stem Rotates **Counter-Clockwise** As Input Signal Increases  
Cam should be set with **RA** upwards (standard factory setting)

#### **Spring-Return Actuators**



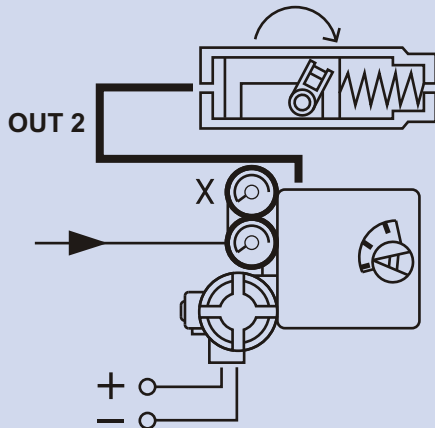
**OUT 2 Port must be plugged**

#### **Double-Acting Actuators**



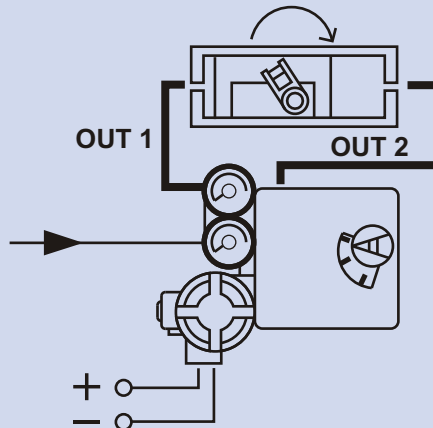
**Direct Acting** - Actuator Stem Rotates **Clockwise** As Input Signal Increases  
Cam should be set with **DA** upwards

#### **Spring-Return Actuators**



**OUT 1 Port must be plugged**

#### **Double-Acting Actuators**



### Intelligent Part Number System



Description	Code	Description	Code	Description	Code
<b>Series:</b>		<b>Pilot Valve</b>		<b>Gauges</b>	
Pneumatic	40	Standard Orifice	1	None	N
Electro-Pneumatic	41	Small Orifice	2	Standard	S
<b>Shaft</b>		Extra-Small Orifice	3	<b>Indication</b>	
Rotary NAMUR	N	<b>Position Feedback</b>		Flat Dial	F
<b>Electrical Ratings</b>		None	N	Dome*	D
Standard / None	S	4-20 mA	T	<b>NAMUR Brackets</b>	
Ex md IIT6	E	2 SPDT Limit Switches	S	80x30x20 (30)	BKT-FC001
Intrinsically Safe	I*	2 PNP Sensors	P	130x30x30	BKT-FC002
		2 IS Sensors	I		

Positioners include: linear feedback cam, 7 SCFM spool valve and gauges (optional on pneumatic)

\*delayed availability

### Dimensions (in.)

