

PARTS LIST

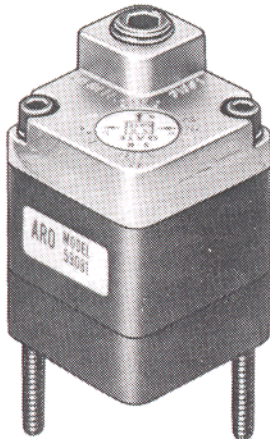
ARO PNEUMATIC LOGIC CONTROL
LOGIC FUNCTION ASSEMBLY

MODEL 59181

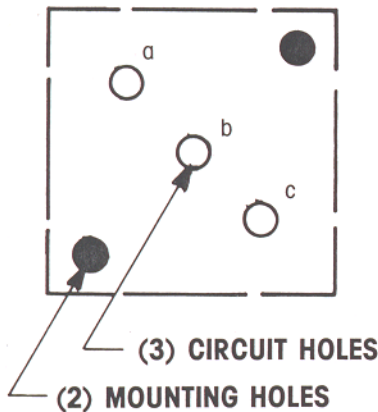
FORM 5048

REV. 3/88

"SET-RESET GATE" LOGIC ELEMENT



CIRCUIT PATTERN



NOTE: THIS ELEMENT CAN BE
ROTATED 180° SO POSITION a,
b,c BECOMES c,b,a.

LOGIC SYMBOL	LOGIC FUNCTION	PORT DESIGNATION
	SET and RESET in conjunction with MEM element	a = input b = output c = input
VALVE SYMBOL	VALVE FUNCTION	PORT DESIGNATION
	pilot operated check valve	a = pilot b = output c = input

DESCRIPTION

The SET-RESET gate element is used in conjunction with Model 59113 MEMORY element to provide a SET and RESET signal for the MEMORY element. A signal supplied at c provides an output at b which is retained when the c signal is removed. A signal supplied at a removes the output at b. The element has three bottom ports which are designated a,b,c and are marked on the cover to correspond to the position on the base. The port connects to the circuit board, or function base, and through circuit passages in the circuit module allow the required circuitry to be performed.

OPERATING PRESSURE RANGE

30 to 150 P.S.I.G.

TEMPERATURE RANGE

+32°F to +160°F

RESPONSE TIME

Shortest pressure signal to "SET" = 17 ms
Shortest pressure signal to "RESET" = 19 ms.

FLOW CHARACTERISTICS

Flow c → b at 100 P.S.I.G. = 9.3 C.F.M. free air
Capacity factor C_v = 0.14

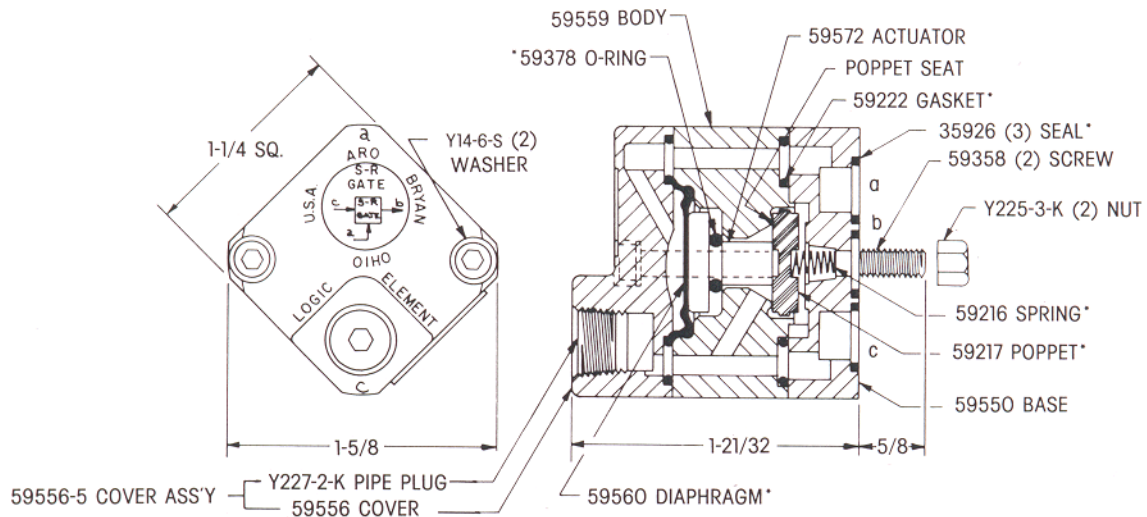
INSTALLATION

Pressure regulation is recommended for applications where optimum repeatability is required.
Lubrication is not required.
Filtration is recommended to assure a clean, dry air supply for optimum repeatability.

OPERATING DESCRIPTION

When input c is pressurized, poppet 59217 is unseated allowing air to flow around it and pressurize output b. When input c is removed, poppet 59217 reseats on the poppet seat trapping output b. Thus output b remains on. When input a is pressurized, diaphragm 59560 forces actuator 59572 and poppet 59217 downward unseating the poppet and making the connection b to c. Output b is then bled to atmosphere (input c must be off) and therefore is off. Screws 59358 thread into the base to assemble the element, but also extend beyond the base for insertion into the mounting holes in the circuit board assembly (or function base). Y225-3-K nuts are used to attach the assembly to the circuit board. 35926 seals provide sealing between the circuit base plate and the element ports.

PARTS LIST



*Parts are included in repair kit

SERVICE (Use Repair Kit NO. 59573)

In the event of a malfunction:

Check diaphragm 59560 for rupture or defects.

Check poppet 59217 for excessive wear or defects.

Check O-ring 59378 for rupture or wear.

Check poppet seat for damage.

Check 59222 gaskets and 35926 seals for imperfections if external leakage occurs.

Testing (element mounted on function base)

Apply pressure at port c. Output should appear at port b. Remove pressure at port c. Output should remain at port b. Apply pressure at port a. Output should disappear at port b.

CIRCUIT FOR USE WITH MODEL 59113 "MEM" ELEMENT

