

# Manual Reset Relay

## 3-Way Two Phase

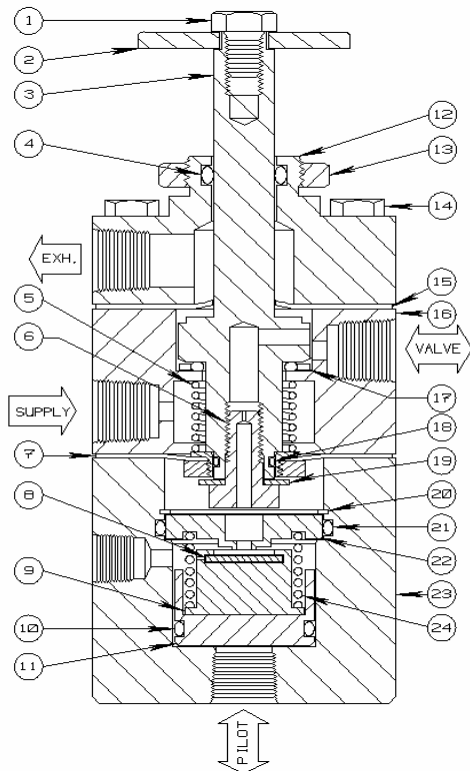
1/4" FEMALE NPT, 40 PSI MIN-150 MAX PSI PANEL MOUNT

PORTED EXHAUST

Model 11RRS87



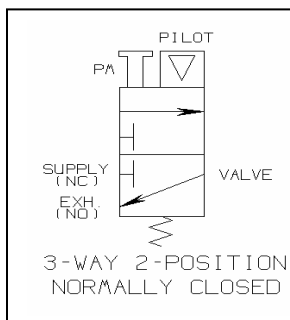
Conforms to the SEP category of the European Pressure Equipment Directive  
Issue No. 97/23/EC



The **11RRS87** is a two position, three-way panel mount, normally closed block and bleed, Pilot supply pressure actuated valve. It is designed to establish Supply-to-Valve output pressure with manual **Pull** of the handle. Once the valve handle is pulled and Pilot Supply pressure is applied, the Relay's normal in-service placement will be maintained. A loss of Pilot Supply pressure will block the Supply (inlet) port and exhaust the accumulated operating pressure within the receiving control circuit. To close the valve, **Push** on the valve handle to release downstream pressure.

This type of relay valve is generally referred to as a Two Phase Relay. It is capable of using a lower Pilot supply pressure (30-50 PSI) to maintain the receiving control circuit (generally 50-150 PSI). It is most frequently used to control the open/close operating sequence of a Surface Safety Valve (SSV) or operate a fail closed pneumatic Safety System.

The 11RRS87 also has a special feature that will block the Supply (Inlet) port, whenever master supply pressure decreases below 40 PSI. Manual reset is required after operating instrument supply pressure is restored.



### PARTS LIST:

- |                   |                    |                  |
|-------------------|--------------------|------------------|
| 1. Hex Bolt *     | 9. Piston Insert   | 17. Block Seal * |
| 2. Handle         | 10. O Ring *       | 18. O Ring *     |
| 3. Plunger        | 11. Piston         | 19. Washer *     |
| 4. O Ring *       | 12. Exh. Deflector | 20. Snap Ring *  |
| 5. Spring *       | 13. Panel Nut      | 21. O Ring *     |
| 6. Orifice Bolt * | 14. Hex Bolt (4) * | 22. Inner Valve  |
| 7. Diaphragm *    | 15. Top Seal *     | 23. Lower Body   |
| 8. Viton Seal *   | 16. Upper Body     | 24. Spring *     |

\* Indicates parts included in a Repair Kit

**Sigma Model Number 11RRS87**  
**1/4" FEMALE NPT, 40 PSI MIN-150 MAX PSI PANEL MOUNT PORTED EXHAUST**

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**Product Specifications**

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**Manual Reset (Operate) Feature:** Pull and Hold to Open – Push to Close

**Flow Control Application:** Normally Closed

**Control Function:** Three-Way (Block & Bleed) – Two Position Instrument Control

**Pressure Rating Body (Control Ports):** 150 PSI maximum (10.34 bar)  
(Minimum pressure required: 40 PSI)

**Pilot Supply Pressure:** Normal Operating Pressure 50 PSI

**Instrument Supply Service at Control Ports:** Pneumatic

**Connection Size:** 1/4-18 Female N.P.T. (Pilot, Supply, Valve, Exhaust)

**Panel Mount:** Yes

**Panel Hole Cutout Size Required:** 1.00 Diameter

**Orifice:** .250 Diameter

**Seal Material:** Viton

**Component Material (Metal):** 316 Stainless Steel

**Weight:** 5-1/2 Lbs.

**Operating Temperature:** -20° F to +250° F (-29° C to +121° C)

**Overall Dimensions:** 6 Height x 2-1/2 Diameter (15.24 cm Height x 6.35 cm Diameter)

**Pressure Equipment Directive (PED):** This product conforms to the SEP Category of the European P.E.D.

**Installation and Maintenance Instructions:**

Remove the Hex Bolt (#1), Handle (#2), and Panel Nut (#13). Insert in pre-drilled 1" diameter hole. Replace the Panel Nut, Handle, and Hex Bolt. Sigma recommends the use of appropriate thread sealant for each port connection.

**Shelf Position Port Status**

<b>Pilot</b>	Pilot Supply Inlet (Use with Block and Bleed Pilots)
<b>Supply Inlet</b>	(Instrument Supply Pressure) normally closed
<b>Valve</b>	Outlet Pressure to Receiving Control Circuit (Open to Exhaust Port)
<b>Exhaust</b>	Depressurizes Receiving Control Circuit

**Repair Kit Information**

Repair Kits contain all of the Seals and other components typically replaced when repairing the assembly. In order to maintain optimum operating control function.