Air Lock Relay (VF02)
Three-Way Lock-up Relay (VF03)
Three-Way Pilot Relay (VF04)

Air lock relay

Whether the valve is set for direct or reverse action is determined by considerations to hold the valve position in the event of air failure, to maintain the safety of process either by opening or closing the control valve.

An air lock relay is used when it is required that the air pressure to the actuator be automatically held on the same level unchanged from the pressure prior to pressure change in air source. When supply pressure drops down past a preset value, the device automatically locks the air piping between the instrument and the control valve, and causes the control valve to hold its position until the air failure is rectified.

Three-way lock-up relay

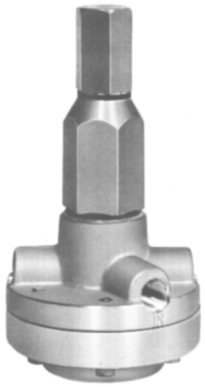
A theree-way lock-up relay is constructed by attaching to a samll sized three-way on-off valve a diaphragm motor provided with the lock mechanism.

This device is used when on off switching service on both manual and automatic operation is required. This device, working on the balance between supply pressure coming through the inlet and the force acting on pre-set spring, has the function of switching the path for signal air (line pressure).

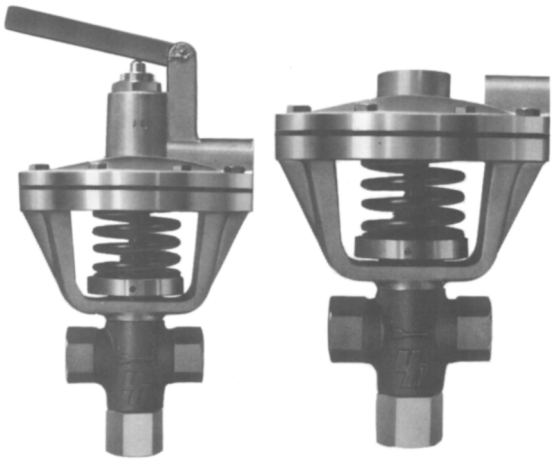
Resetting may be done by means of the maunal lever.

Three-way pilot relay

A three-way pilot relay is a small sized three-way on-off valve which is obtained by removing the lock mechanism from a three-way lock-up relay. This device works on the balance between supply pressure on the upper diaphragm and the force acting on pre-set spring, and has the function of changing the path of signal air alternately. The pressure at which the switching takes place can be adjusted by adjusting the spring.



Air lock relay



Three-way lock-up relay　　Three-Way pilot relay

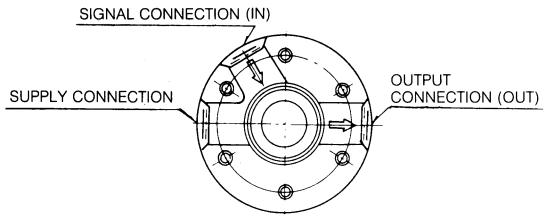
Standard specifications

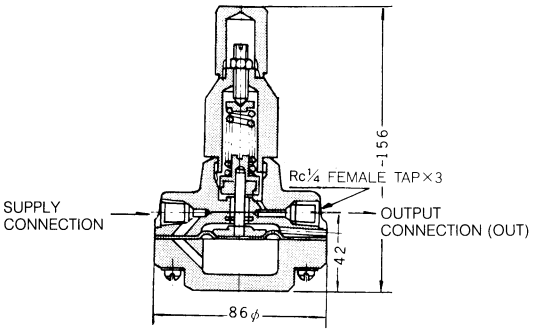
Air Lock Relay

Pressure rating : 7.0kgf/㎠ {690kPa}
Materials :
Body : Brass
Diaphragm : Chloroprene rubber with fabric reinforced
Trim : Brass (with chloroprene rubber sheet)
Line pressure : 2.0kgf/㎠{200kPa}
Switching point adjustable range : 1.2～3.0kgf/㎠ {120～290kPa}
Supply pressure : 7.0kgf/㎠{690kPa}(maximum)
Connection :
Signal, supply and output; Rc¼ or ¼NPT internal thread
Ambinet temperature : −30 ～ +80℃

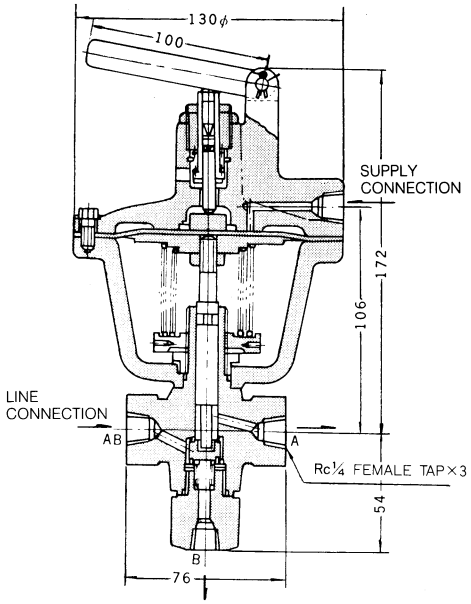
Three-way lock-up relay and three-way pilot relay

Pressure rating : 7.0kgf/㎠ {690kPa}
Materials :
Body; Brass
Diaphragm; Ethylene propylene rubber with fabric reinforced
Trim; Brass (with Nitril rubber sheet)
Actuator : Aluminum alloy
Line pressure : 5.0kgf/㎠{490kPa} or under
Switching point adjustable range : 0.4～0.8kgf/㎠ {40～80kPa}
Supply pressure : 2.8kgf/㎠{270kPa} (maximum)
Dead band : Within 0.1kgf/㎠{10kPa}
Connection : Supply, line; Rc¼ or 1/4NPT internal thread
Ambient temperature : −30 ～ +80℃

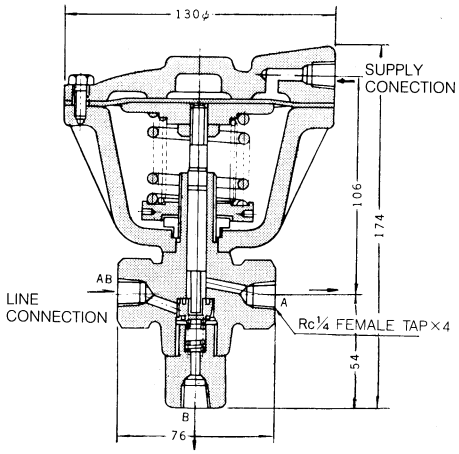




Air lock relay



Three-way lock-up relay



Three-way pilot relay

Figure 1. Dimensions

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