

LV-225 LOCK VALVE

The LV-225 Lock Valve is designed to maintain a pneumatic positioner equipped control valve in last position upon loss of instrument signal. The LV-225 is compatible with most pneumatic valve positioners, I/P Transducers and pneumatic controllers. The LV-225 may be factory installed by VRG on control instrumentation assemblies or easily retrofit to existing installations.

FEATURES:

- Provides protection in the event of pneumatic instrument signal loss caused by failure of RTU, I/P transducer, pneumatic controller, or other signal generating devices
- Available for new Installations or easily retrofit to most pneumatic positioners
- Setpoint can be set anywhere within the control range of the unit.

APPLICATIONS:

- Most pneumatic valve positioner applications equipped with I/P Transducer or Pneumatic Controller
- The LV-225 causes slightly delayed signal response to pneumatic valve positioners and is not intended for fast-acting applications such as power plant control



Model LV-225 Lock Valve
(Shown Without Reference Tank)

SPECIFICATIONS

Maximum Supply Pressure:	40 psig (276kPa)
Temperature Range:	(-29°C to 71°C) -20°F to 160°F)
Port Sizes:	0.250 FNPT
Cv (Flow Capacity):	0.03125 in Nozzle (Cv=0.60)
Approximate Weight *Includes Volume Tank:	20 lbs. (9.1 kg)*
Reference Tank:	5.0 lbs. DOT Standard Reference Tank May be Supplied
Available Spring Ranges:	3.0-15 psig (21-103 kPa) / Black Spring / Part No. CS-0100 5-53 psig (55-365 kPa) / Brown Spring / Part No. CS-0110

MATERIALS

Body:	VRG Military Grade Al Alloy & "Stealth" Corrosion Protection
Internal Parts:	316 SS
Diaphragms:	Nylon Reinforced Buna-N
O-Rings/Seats:	Buna-N
Control Spring:	Painted Alloy Steel
Bolting:	316 SS
Adjustment Screw:	316 SS

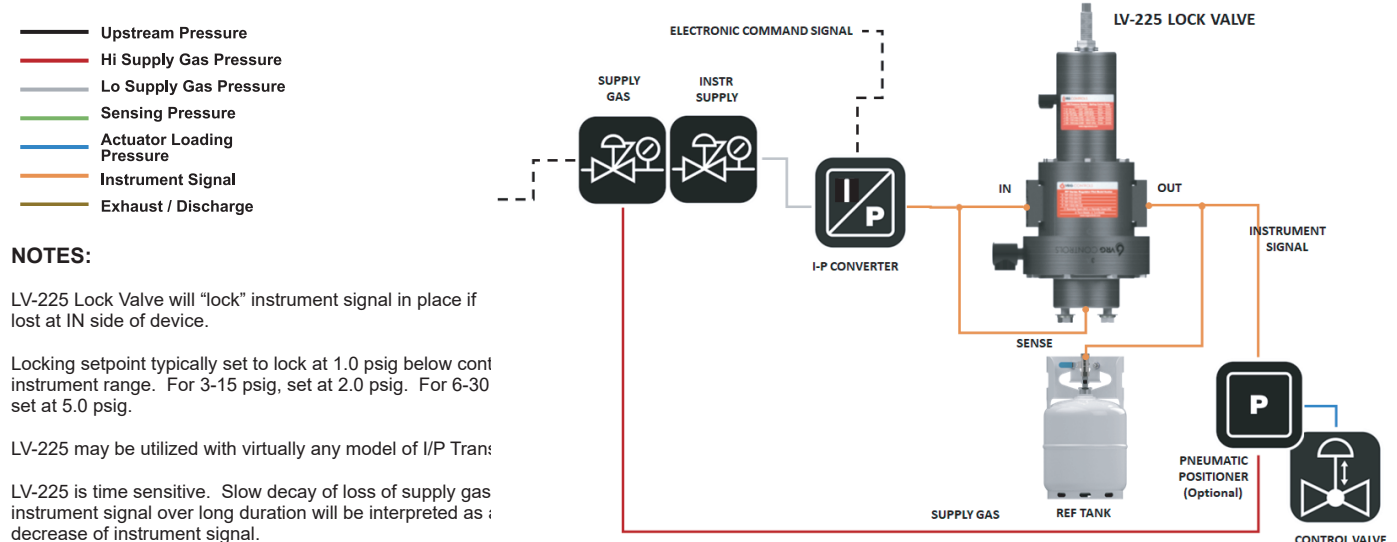
HOW IT WORKS:

The LV-225 Lock Valve is a 2-way, normally-closed pressure sensor which is installed between the output of the instrument signal generating device (I/P transducer or pneumatic controller) and the input of the pneumatic positioner. During normal operation, the instrument signal is above the LV-225 setpoint.

The instrument signal overcomes the spring pressure pushing the seat upwards and away from the nozzle. Flow passes through the LV-225 to the input signal port of the pneumatic positioner. The reference tank maintains a pressure equivalent to the instrument signal on a “delayed-basis”.

An abnormally rapid decrease of instrument signal below the LV-225 setpoint will be interpreted as failure. The spring pressure will push the seat downward closing the nozzle and interrupt the gas flow through the LV-225. The LV-225 will isolate the pneumatic positioner signal input with the pressure trapped in the LV-225 reference tank. This will keep the control valve in its last position.

LV-225 LOCK VALVE W I/P TRANSDUCER



LV-225 LOCK VALVE W PNEUMATIC CONTROLLER

