906 W Pont Des Mouton Rd • Lafayette, LA 70507 USA Phone: 337-233-7380 Fax: 337-234-5349

HLR 7970 High / Low Pressure Sensor

The HLR 7970 Pressure Sensor is a pressure balance spool control valve used to respond to a predetermined pressure setting. In the Pressure Safety Low (PSL) mode, the valve functions as a 3-way, normally closed, block and bleed control. When used in the Pressure Safety High (PSH) mode, it functions as a 3-way, normally open, block and bleed control. The HLR 7970 is a unique self-contained control capable of responding to set pressure points from 10 to 10,000 PSI (0.69-689.50 Bar) and can be used in control circuits with 30-125 PSI pneumatic or hydraulic instrument supply pressure.

Design Features:

Dimensions: 1.750” Dia. X 8.000” L.
Working Pressure: Sensed Inlet - 10 - 10,000 PSIMax.
Connections: Sensed Inlet - 1/2”-14 NPT”M”
1/8”-27 NPT “F”
Control 1/4”-18 NPT “F”
Weight: 3.5 lbs.
Panel Mount Detail: 1 5/8” diameter hole required.

High / Low Pressure Sensor HLR 7970

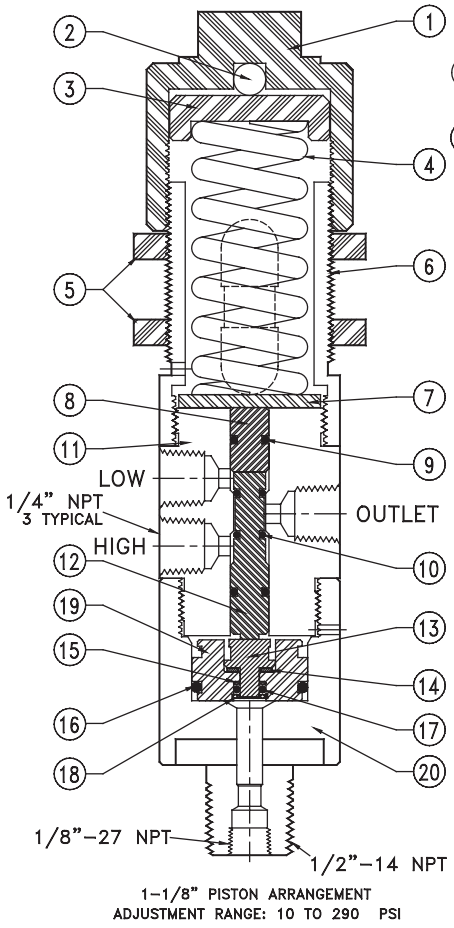
A SELF CONTAINED UNIT

For Pressures From 10 to 10,000 PSI (0.69 - 689.50 Bar)

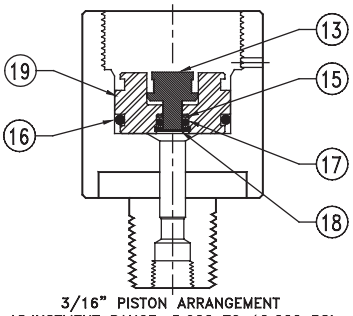
30-125 PSI Pneumatic or Hydraulic Instrument Supply

The piston arrangement and pressure range may be obtained through a combination of rearranging the components in the current piston assembly and utilizing components in the storage tube.

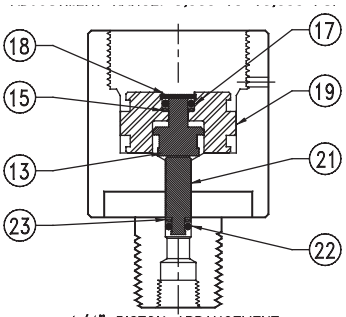
2-12-2003



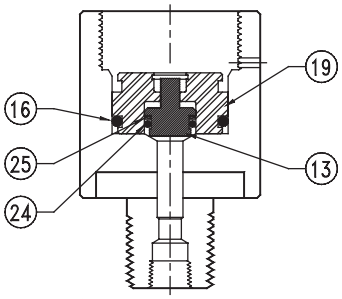
1–1/8" PISTON ARRANGEMENT
ADJUSTMENT RANGE: 10 TO 290 PSI



3/16" PISTON ARRANGEMENT
ADJUSTMENT RANGE: 5,900 TO 10,000 PSI



1/4" PISTON ARRANGEMENT
ADJUSTMENT RANGE: 1,440 TO 5,900 PSI



1/2" PISTON ARRANGEMENT
ADJUSTMENT RANGE: 290 TO 1,440 PSI

BILL OF MATERIAL

ITEM	PART NAME	PART NUMBER	MATERIAL
1.	Adjusting Cap	79710A	Delrin
2.	Ball	5/16"D	316SS
3.	Spring Guide	79711A	Delrin
4.	Spring	HLR-1	316SS
5.	Lock Nut (2)	79712A	Delrin
6.	Spring Housing	79709A	316SS
7.	Stop	79708	316SS
8.	Upper Stem	79707A	316SS
9.	O-Ring (2)	AS-010VTC75	Viton
10.	O-Ring (2)	AS-008VTC95	Viton
11.	Body	79704A	316SS
12.	Lower Stem	79706A	316SS
13.	Small Piston	79703A	316SS
14.	Spacer	79705	316SS
15.	Back Up Ring	AS-008VBU	Viton
16.	O-Ring	AS-119V75	Viton
17.	O-Ring	AS-008V95	Viton
18.	Retainer Ring	.312IRR	316SS
19.	Large Piston	79702MSG	316SS
20.	Piston Housing	79701A	316SS
21.	1/4" Piston	79713A	316SS
22.	O-Ring	AS-006V95	Viton
23.	Back Up Ring	AS-006VBU	Viton
24.	O-Ring	AS-012V75	Viton
25.	Back Up Ring	AS-012VBU	Viton

Other 7970 Series Models available:

7970-20M - 2,000-20,000 PSI Adjustment Range with 9/16 Medium Pressure Conn
7970-20H - 2,000-20,000 PSI Adjustment Range with 9/16 High Pressure Conn
7970T - Teflon "wetted" O-rings, NACE Certified
7970LP - Low Pressure, 2-50 PSI adjustment range
7970H-A - Offset instrument controls ports for 3/8 tubing
7970SS - All stainless steel (316SS)
7970DSS - Duplex stainless steel "wetted" parts

CAUTION

1. **Do not disassemble while under pressure**.
2. Remove spring tension to assemble or disassemble spring housing from body.
3. Do not plug control ports.

NOTE:
A. Instrument Supply pressure 30-125 PSI Pneumatic or Hydraulic.
B. Extra parts for changing piston arrangements are stored in tube.

- Instrument CV Factor: ***0.35***

Dead Band: ***3-5% of Pressure Setting.***

- Pressure Setting Repeatability Factor:
within 1% of Pressure Setting.

"HIGH" Application (PSH) *(Pressure Increasing/Rising)*	**"LOW" Application (PSH)** *(Pressure Decreasing/Falling)*
Connection - Function	**Connection - Function**
H - Supply INlet	**L** - Supply INlet
L - Exhaust	**H** - Exhaust
O - Outlet (Output)	**O** - Outlet (Output)