

Pneumatic Pressure Switches

NON-ELECTRIC



Open pneumatic pressure switch assembly. Five ported four way valve is actuated by transducer mechanical displacement when pressure exceeds adjustable set point. Shown with optional barb connectors installed.

Description

The pneumatic pressure switch combines a pressure sensing element and a spool valve to produce a switching device with an adjustable setpoint. The assembly is non-electric, using only air or inert gas in the switch unit.

The assembly consists of two components, a switch unit and a transducer unit. The switch unit contains a mechanically actuated, five ported spool valve which provides the output signals. The transducer unit senses the pressure of a wide variety of liquids or gases and transmits a mechanical movement, at the preset pressure level, to the switch unit.



Pneumatic pressure switch has gasketed enclosure. Adjusting nut sets pressure at which pneumatic valve is actuated. Shown with optional barb connectors installed.

Catalog Numbers

PRESSURE SPECIFICATIONS		SWITCH UNIT		PRESSURE TRANSDUCER UNIT				
Adjustable Operating Range	Rated Overrange (PSIG) ①	Open Switch	Enclosed Switch	Aluminum & Buna "N"	Polyester With Threaded Brass Insert & Buna "N"	Brass & Buna "N"	316 S.S. & Viton	All 316 S.S.
0 - 30" Hg (VAC)	50	OB36A	OB31B	KRV34A11	—	KRV34A21	KRV34A32	—
30" Hg (V) - 14 PSIG	50	OB26A	OB21B	KRV24A11	—	KRV24A21	KRV24A32	—
0 - 4 PSIG	60	OB46A	OB41B	KRD40A11	KRD40A71	KRD40A21	KRD40A42	—
0 - 9 PSIG	60	OB36A	OB31B	KRD30A11	KRD30A71	KRD30A21	KRD30A42	—
2 - 18 PSIG	60	OB26A	OB21B	KRD20A11	KRD20A71	KRD20A21	KRD20A42	—
2 - 18 PSIG	100	OB36A	OB31B	—	—	—	—	KRE30A44
4 - 36 PSIG	150	OB26A	OB21B	KRE20A11	KRE20A71	KRE20A21	KRE20A42	KRE20A44
6 - 60 PSIG	150	OB16A	OB11B	KRE10A11	KRE10A71	KRE10A21	KRE10A42	KRE10A44
10 - 100 PSIG	200 ①	OB16A	OB11B	KRF10A11	KRF10A71	KRF10A21	KRF10A42	KRF10A44
20 - 200 PSIG	400 ①	OB16A	OB11B	KRG10A11	KRG10A71	KRG10A21	KRG10A42	KRG10A44
30 - 300 PSIG	450	OB16A	OB11B	KRH10A11	—	KRH10A21	KRH10A42	KRH10A44
40 - 400 PSIG	500	OB16A	OB11B	KRJ10A11	—	KRJ10A21	KRJ10A42	KRJ10A44
60 - 600 PSIG	2000	OB26A	OB21B	—	—	KRL20A21	KRL20A42	—
100 - 1000 PSIG	2000	OB16A	OB11B	—	—	KRL10A21	KRL10A42	—
160 - 1650 PSIG	5000	OB26A	OB21B	—	—	KRN20B21	KRN20B42	—
270 - 2700 PSIG	5000	OB16A	OB11B	—	—	KRN10B21	KRN10B42	—
600 - 6000 PSIG	9000	OB16A	OB11B	—	—	—	KRQ10B42	—

① Rated overrange pressure on KRF10A71 is 150 PSIG and on KRG10A71 is 300 PSIG

Specifications

SWITCHING VALVE

5 ported, 4 way

10-32 threaded female connections

Operating Pressure of 5 working ports – vacuum to 100 psig

Working Fluid – Clean Dry Air or Inert Gas

Air Usage – Leakage to atmosphere approximately .002 SCFM at 100 psig

C_v – .12

Flow Capacity – 6.5 SCFM at 100 psig

Request form OK-043 for more information.

PRESSURE TRANSDUCER

Wetted Materials – See chart

Connection – 1/4" NPT

Range – Vacuum to 6000 psig

Deadband – less than 15% of range (316SS diaphragm less than 25% of range)

Repeatability – ± 2% of range

TEMPERATURE RATINGS

Ambient – -4°F to 122°F

Buna-N – -4°F to 180°F

Viton – -4°F to 250°F

316SS – -50°F to 300°F

Polyester – -4°F to 130°F

Ordering Information

A pressure switch assembly consists of a switch unit and a pressure transducer unit.

For Example:

OB46A / KRD40A32
Switch Unit Transducer Unit

To select an assembly refer to specifications chart above.

1. Determine the pressure range required.
2. Check that rated overrange pressure rating is sufficient.
3. Read across and select a switch unit with the type of enclosure required.
4. Continue across the same line and select a transducer compatible with the liquid or gas application.

NON-ELECTRIC



Pneumatic temperature switch with direct mount transducer unit. Open switch unit shown.

Description

The pneumatic temperature switch combines a temperature sensing element and a spool valve to produce a switching device with an adjustable setpoint. The assembly is non-electric, using only air or inert gas in the switch unit.

The assembly consists of two components, a switch unit and a transducer unit. The switch unit contains a mechanically actuated, five ported spool valve which provides the output signals. The transducer unit senses the temperature of a wide variety of liquids or gases and transmits a mechanical movement, at the preset temperature, to the switch unit.



Pneumatic temperature switch with capillary and bulb transducer unit. Enclosed switch unit shown.

Catalog Numbers

TEMPERATURE SPECIFICATIONS		SWITCH UNIT		TEMPERATURE TRANSDUCER UNIT					
Adjustable Operating Range °F*	Rated** Overrange Temperature °F*	Open Switch	Enclosed Switch	Direct Mount		6' Capillary And Bulb		12' Capillary And Bulb	
				Copper	316 SS	Copper	316 SS	Copper	316 SS
-30 - 60	250	OB16A	OB11B	OKB10A1	OKB10A4	OKB11A1	OKB11A4	OKB11A1D	OKB11A4D
0 - 90	300	OB16A	OB11B	OKD10A1	OKD10A4	OKD11A1	OKD11A4	OKD11A1D	OKD11A4D
50 - 160	350	OB16A	OB11B	OKF10A1	OKF10A4	OKF11A1	OKF11A4	OKF11A1D	OKF11A4D
100 - 220	450	OB16A	OB11B	OKJ10A1	OKJ10A4	OKJ11A1	OKJ11A4	OKJ11A1D	OKJ11A4D
160 - 260	500	OB16A	OB11B	OKL10A1	OKL10A4	OKL11A1	OKL11A4	OKL11A1D	OKL11A4D
225 - 340	600	OB16A	OB11B	-	-	OKN11A1	OKN11A4	OKN11A1D	OKN11A4D
300 - 450	700	OB16A	OB11B	-	-	OKT11A1	OKT11A4	OKT11A1D	OKT11A4D
350 - 510	800	OB16A	OB11B	-	-	OKU11A1	OKU11A4	OKU11A1D	OKU11A4D

* °C = (°F - 32) X 5/9 **Rated overrange temperatures are limited as follows: For copper capillary units -550°F. For direct mount units -260°F.

Specifications

SWITCHING VALVE

5 ported, 4 way

10-32 threaded female connections

Operating Pressure of 5 working ports – vacuum to 100 psig

Working Fluid – Clean Dry Air or Inert Gas

Air Usage – Leakage to atmosphere approximately .002 SCFM at 100 psig
Cv – .12

Flow Capacity – 6.5 SCFM at 100 psig

Ambient Temperature – minus 4°F to plus 122°F

Request form OK-088 for more information.

TEMPERATURE TRANSDUCER

Sensor Materials – Sensing bulb available in copper or 316 SS

Direct Mount Connection – 1/2" NPT

Capillary and Bulb Connection – Fits into thermal well or union connector. Bulb is 3/8" diameter.

Setpoint Range – minus 60°F to plus 510°F

Deadband – 8°F or less

Ordering Information

A temperature switch assembly consists of a switch unit and a temperature transducer unit.

For Example:

OB16A	/	OKF11A1
Open Frame Switch Unit		6' Capillary (Cu) Transducer Unit Range 50-160°F

To select an assembly refer to specifications chart above.

1. Determine the adjustable temperature range required (left column).
2. Check that rated overrange temperature is sufficient for the application.
3. Read across and select either an open frame or enclosed switch unit (OB16A or OB11B).
4. Continue across the same line and select the required direct mount or capillary and bulb transducer unit.