ASHCROFT®

Compact Pressure Switch
Explosion-Proof Body
F-Series

Special features:

- ***Diaphragm-sealed piston actuator for long, reliable service***
- ***Choice of wetted materials and pressure connections for all applications***
- ***Watertight anodized aluminum body for environmental protection***
- ***Hermetically sealed snap-acting switch element***
- ***Field adjustable***
- ***Standard ½ NPT Male electrical conduit connection***
- ***Factory sealed leads***
- ***Directly interchangeable with many similar models for convenience***
- ***UL and CSA listed standard***
- ***Setpoints adjustble from 15-100% of range. Exception: stainless steel welded (codes) adjustable from 20-100%***

Ideal for pressure alarm, shutdown, control on:

- ***Engines and compressors***
- ***Process applications***
- ***Offshore applications***
- ***Panels***
- ***Pipelines***
- ***Hazardous locations***
- ***Corrosive environments***
- ***Machine tools***
- ***Replacement and retrofit***
- ***Where size is a consideration or equipment is being downsized***

1 - FUNCTION

FPS - Pressure switch, single setpoint, fixed deadband, field adjustable

2 - ENCLOSURE (BODY)

N7 - NEMA 3, 4, 7 & 9, IP66
Anodized aluminum for hazardous locations

3 - SWITCH ELEMENT CODE

Code	SPDT Switch Elements UL/CSA Listed	
P	Hermetically Sealed, Narrow Deadband	5A, 125/250 Vac
J	Hermetically Sealed, General Purpose	11A, 125/250 Vac 5A, 30 Vdc
L	Hermetically Sealed, Gold Contacts	1A, 125 Vac

4 - ACTUATOR SEAL

Code	Material	Proc. Temp. Limits (°F)
B	Buna N	0-150
V	Viton	20-200
T	Teflon	0-150
R	SS Diaphragm/Viton O-Ring	0-150
S	316 SS Welded	0-200
H	SS Piston/Viton O-Ring	20-200

5 - PRESSURE CONNECTION

Code	Description
25	¼ NPT Female
07	½ NPT Female (Standard)

6 - F-SERIES OPTIONS

Code	Description
XFP	Fungus proofing
XFS	Factory adjusted setpoint
XK3	Terminal blocks
XNH	Tagging stainless steel
X6B	Cleaned for oxygen service

7A - NOMINAL RANGE & PERFORMANCE TABLE – BUNA (CODE B)

Nominal Range		Proof Pressure	Deadband (by Switch Element)	
psi	bar	psi	Code J	Code P,L
30 in.Hg Vac.†	–1	1000	1.8-8.0	0.4-5.0
30	2	1000	0.2-1.5	0.1-1.3
60	4	1000	0.2-2.5	0.3-1.5
100	7	1000	0.5-4.0	0.5-2.5
200	14	1000	1.5-8.0	0.5-5.0
400	28	1600	1.0-15.0	1.5-9.0
600	40	2400	4.0-28.0	2.0-15.0
1000	70	4000	6.0-50.0	3.0-30.0

7B - NOMINAL RANGE & PERFORMANCE TABLE – HIGH PRESSURE (CODE H)

1000	70	12,000	50-100	N/A
2000	140	12,000	100-200	N/A
3000	210	12,000	150-300	N/A
4000	280	16,000	150-350	N/A

7C - NOMINAL RANGE & PERFORMANCE TABLE – WELDED SS (CODE S)

30	2	1000	1.0-4.5	0.5-3.5
60	4	1000	1.0-5.0	0.5-4.0
100	7	1000	1.5-10.0	1.0-6.0
200	14	1000	2.0-18.0	1.0-12.0
400	28	1600	5.0-32.0	2.0-20.0
600	40	2400	9.0-50.0	4.0-30.0
1000	70	4000	15.0-80.0	7.0-50.0

7D - NOMINAL RANGE & PERFORMANCE TABLE – BUNA (CODE V, T, R)

30 in.Hg Vac.†	–1	1000	1.5-10.0	0.5-7.0
30	2	1000	0.5-3.5	0.2-2.5
60	4	1000	0.5-4.0	0.5-3.0
100	7	1000	1.0-7.0	1.0-4.5
200	14	1000	12.5-12.0	1.0-8.5
400	28	1600	5.0-30.0	2.0-17.0
600	40	2400	8.0-48.0	4.0-34.0
1000	70	4000	10.0-80.0	5.0-55.0

Note: Switches calibrated at 70°F reference.

TO ORDER THIS F-SERIES PRESSURE SWITCH:

Select:	FPS	N7	P	B	07	XFS	30#
1. Function:							
2. Body:							
3. Switch Element (Table 3):							
4. Actuator Seal (Table 4):							
5. Pressure Port: Standard ½ NPTF							
6. Options (see table 6):							
7. Nominal Range (see Tables 7A, 7B, 7C, 7D):							

Consult factory for guidance in product selection
Phone (203) 385-0217, Fax (203) 385-0602 or
visit our web site at www.ashcroft.com

Installation & Maintenance Sheet
F-Series Pressure Switch

ASHCROFT®

INTRODUCTION

The F-Series pressure switch is a precision built U.L. and CSA approved control device which features a single or dual SPDT, hermetically sealed mechanical snap-action switch. Several wetted material constructions for compatibility with pressure media may be obtained.

Series FP-S switches have a fixed deadband which will be within the limits noted on the nameplate.

MOUNTING

The F-Series snap-action pressure switch has an anodized aluminum body and conduit fitting with a 316 stainless steel pressure port.

Two holes in the body are used to surface mount the control. Location of the holes is shown on the general dimension drawings. Mount on a vibration free surface in any orientation. When tightening control to pressure line, always use the hex on the pressure connection.

NEVER TIGHTEN BY TWISTING THE BODY OR THE CONDUIT HEX.

ADJUSTMENT OF SETPOINT

A single setpoint adjustment nut is located centrally inside the cover of the body. Align bottom of adjustment nut slot with scale for approximate pressure setting.

The adjustment nut is locked in place with a set screw located centrally in the body below the adjustment nut. A 5⁄64″ Allen wrench is used to adjust the set screw.

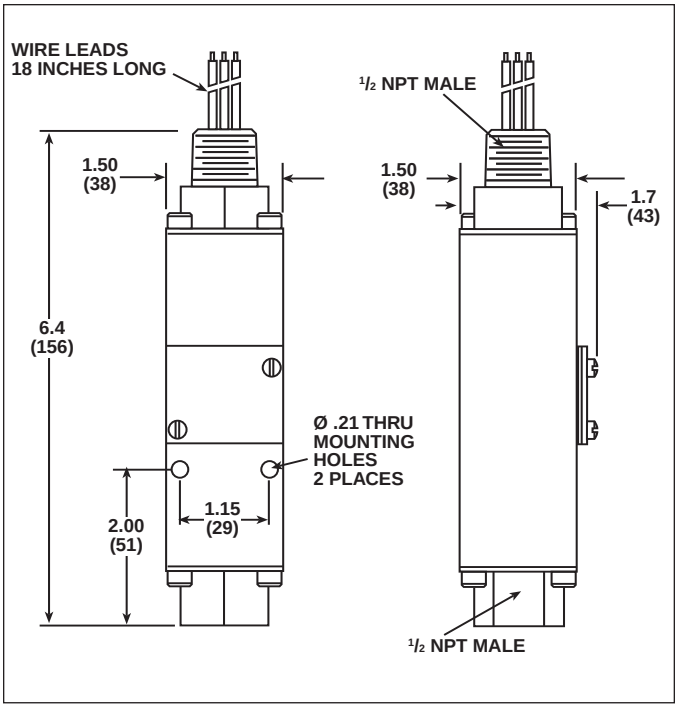
For accurate setpoint calibration use Ashcroft ATE-100 handheld calibrator with a pump, or Ashcroft 1305 dead-weight gauge tester.

As received, the pressure switch will normally be set to approximately 90% of the indicated range. Pressurize the system to the required setpoint and turn the adjustment nut until switch changes mode. When the setpoint has been achieved raise and lower pressure to ensure that setpoint is correct.

After installation of the control replace cover to protect internal parts from the environment.

ELECTRICAL CONNECTION

The F-Series switch is available in SPDT or (2) SPDT circuit. Wire leads (18″) are provided for both switches.



STANDARD RANGES
30″ Hg Vac.
30, 60, 100, 200, 400, 600, 1000, 3000, 4000 psi

SPDT		**(2) SPDT**	
Common	– White	Common	– (JJ) White/Black; (LL) White/Green
Normally Open	– Blue	Normally Open	– Blue
Normally Closed	– Red	Normally Closed	– Red
Ground	– Green		
		Common	– Black
		Normally Open	– Blue/Black
		Normally Closed	– Red/Black
		Ground	– Green

Note: When using a vacuum range switch, the N.C. is blue and N.O. is red.

ELECTRICAL RATING

Description	Order Code Electrical Rating (Resistive)	SPDT	DPDT
General Purpose:	11A 125/250 Vac; 5A 30 Vdc	J	JJ
Narrow Deadband:	5A 125/250 Vac	P	N/A
Gold Contacts:	1A 125 Vac	L	LL