ASHCROFT®

Miniature Pressure Switches, Watertight Stainless Steel Body, A-Series

- ***Wide variety of electrical connections including wire leads, spade and DIN connectors***
- ***316L stainless steel body sealed for environmental protection***
- ***Precision snap-acting switch element***
- ***Choice of field-adjustable or factory set only***
- ***UL and CSA listed CRN, RoHS***
- ***SIL 3 capable***

The Ashcroft® A-Series pressure switches are designed for tough industrial and OEM applications requiring a durable, high-quality miniature switch.

Ideal for pressure alarm, shutdown, or control on heavy vehicles, machine tools, electronic equipment, engines, compressors, and wherever size is a consideration or equipment is being downsized.

1 - FUNCTION

APS - Pressure switch, single setpoint, fixed deadband, factory set, not field adjustable
APA - Pressure switch, single setpoint, fixed deadband, field adjustable

2 - BODY (ENCLOSURE)

N4 - Watertight 316 stainless steel body

3 - MICRO SWITCH, FIRST CHARACTER

Code	
1	Single Switch – SPDT
2	Dual Switch – DPDT (not available with "S" actuator) with <100 psi range

3 - MICRO SWITCH, SECOND CHARACTER

Code		
G	Gold Contact –	0.1A @ 125 Vac, 0.1A @ 30 Vdc
H	Higher Current –	5A @ 125/250 Vac, 5A @ 28 Vdc resistive, 3A @ 28 Vdc inductive
L	Higher Current Gold Contacts –	1A @ 125 Vac, 1A @ 28 Vdc resistive, 0.5A @ 28 Vdc inductive
P	General Purpose –	3A @ 125/250 Vac, 2A @ 30 Vdc

4 - ELECTRIC CONNECTION

Code	
012C‡	½ NPT male conduit connction with 3-18 AWG wires 12″ length
000H	Micro DIN Connector – Watertight DIN 43650 FORM C cable socket with mating connector, not available with DPDT switching
00MH	Micro DIN Connector – Watertight DIN 43650 FORM C cable socket with mating connector, not available with DPDT switching
012L‡	Wire leads, 3-18 AWG PVC insulated wires 12″ length
000N	Nonstandard, customer specified see # variation
000T	Spade terminals, 4 – 0.187″ male spade, not available with DPDT switching

5 - ACTUATOR SEAL

Code	
B	316 SS piston & Buna O-ring, ranges ≥100 psi
V	316 SS piston & Viton O-ring, ranges ≥100 psi
S	316 SS welded diaphragm, ranges ≤200 psi

‡ First three digits represent the length of the wire leads in inches. 012, 024, 048 & 072 are standard available lengths. Consult factory for custom length availability.

6 - PRESSURE CONNECTION CODE

Code	Description
01	⅛ NPT Male
02	¼ NPT Male
03	⅛ NPT Female*
25	¼ NPT Female*
05	7/16-20 SAE Male
06	VCR Fixed*
07	VCO Fixed*
12	G¼A (Type E Stud End)
13	G¼B
75	0.75″ Tri-Clamp® connection (includes 3A Approval)†
15	1.5″ Tri-Clamp® connection (includes 3A Approval)†
20	2.0″ Tri-Clamp® connection (includes 3A Approval)†

7 - PRESSURE RANGE

Actuator	psi	Bar	kPa	Kg/cm²
S	–15/15#	–1/1BR	–100/100KP	–1/1KSC
S	30#	2BR	200KP	2KSC
S	60#	4BR	400KP	4KSC
B,S,V	100#	7BR	700KP	7KSC
B,S,V	200#	14BR	1400KP	14KSC
B,V	500#	35BR	3500KP	35KSC
B,V	1000#	70BR	7000KP	70KSC
B,V	2000#	140BR	14000KP	140KSC
B,V	5000#	350BR	35000KP	350KSC
B,V	7500#	500BR	50000KP	500KSC

8 - SETPOINT

5 characters maximum representing setpoint of the switch in the same units as the range of the switch. For setpoints in Vacuum specify as "–" pressure.

9 - SETPOINT DIRECTION

Code	Description
R	Rising Pressure (Increasing Pressure)
D	Decreasing Pressure

10 - OPTIONS

Code	Description
XC4	Individual certified calibration chart
XFP	Fungus proofing
XMQ	Positive material identification (75, 15 & 20 process conn. only)
XNC	2 wire leads plus ground wire – wired for normally closed operation
XNO	2 wire leads plus ground wire – wired for normally open operation
XNH	Stainless Steel tag
XNN	Paper tag
X6B	Cleaned for oxygen service
XGO	Ground Wire Omitted

Pressure Connection Notes:
*Available with "S" activator only.
†Ranges ≤500 psi.

Setpoint Notes:
If no setpoint is required on an APA switch use either "NSR" or "NSD". If direction is not known use "NSR" as the default.

Option Notes:
The X character will only appear before the first option, additional options will just be the two characters.
Example: XC4NC6B
If the switch is mounted to a diaphragm seal other than (75, 15, 20 connection) the seal fill fluid is also listed as an X option.

TO ORDER THIS A-SERIES PRESSURE SWITCH:

Select: APS N4 1H 012C S 02 30# - 15 R - X6B

1. Function: APS
2. Enclosure: N4
3. Micro Switch: 1H
4. Electrical Connection: 012C
5. Actuator Seal: S
6. Pressure Connection: 02
7. Pressure Range: 30#
8. Setpoint: 15
9. Setpoint Direction: R
10. Options: X6B

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Miniature Pressure Switches, Explosion-Proof Stainless Steel Body, A-Series

- ***316L stainless steel body sealed for environmental protection***
- ***Precision snap-acting switch element***
- ***Choice of field-adjustable or factory-adjusted to setpoint requirements***
- ***UL, FM and CSA listed***
- ***ATEX & IECEX Explosion proof, flame proof***
- ***Dual seal rated; CRN, CE, RoHS***
- ***SIL 3 capable***

The Ashcroft® A-Series pressure switches are designed for tough industrial and OEM applications requiring a durable, high-quality miniature switch.

Ideal for pressure alarm, shutdown, or control on heavy vehicles, machine tools, electronic equipment, engines, compressors, and wherever size is a consideration or equipment is being downsized.

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

CE LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

1 - FUNCTION

APS - Pressure switch, single setpoint, fixed deadband, factory set, not field adjustable

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

2 - BODY (ENCLOSURE)

N7 - Explosion proof 316 stainless steel body

3 - MICRO SWITCH, FIRST CHARACTER

Code	
1	Single Switch – SPDT
2	Dual Switch – DPDT (not available with "S" actuator or P&G micro switch)

3 - MICRO SWITCH, SECOND CHARACTER

Code		
G	Gold Contact –	0.1A @ 125 Vac, 0.1A @ 30 Vdc
H	Higher Current –	5A @ 125/250 Vac, 5A @ 28 Vdc resistive, 3A @ 28 Vdc inductive
L	Higher Current Gold Contacts –	1A @ 125 Vac, 1A @ 28 Vdc resistive, 0.5A @ 28 Vdc inductive
P	General Purpose –	3A @ 125/250 Vac, 2A @ 30 Vdc

4 - ELECTRIC CONNECTION

Code	
012C‡	½ NPT male conduit connction with 3-18 AWG wires 12″ length

5 - ACTUATOR SEAL

Code	
B	316 SS piston & Buna O-ring, ranges ≥100 psi
V	316 SS piston & Viton O-ring, ranges ≥100 psi
S	316 SS welded diaphragm, ranges ≤200 psi

‡ First three digits represent the length of the wire leads in inches. 012, 024, 048 & 072 are standard available lengths. Consult factory for custom length availability.

6 - PRESSURE CONNECTION CODE

Code	Description
01	⅛ NPT Male
02	¼ NPT Male
03	⅛ NPT Female*
25	¼ NPT Female*
05	7/16-20 SAE Male
06	VCR Fixed*
07	VCO Fixed*
12	G¼A (Type E Stud End)
13	G¼B
75	0.75″ Tri-Clamp® connection (includes 3A Approval)†
15	1.5″ Tri-Clamp® connection (includes 3A Approval)†
20	2.0″ Tri-Clamp® connection (includes 3A Approval)†

7 - PRESSURE RANGE

Actuator	psi	Bar	kPa	Kg/cm²
S	–15/15#	–1/1BR	–100/100KP	–1/1KSC
S	30#	2BR	200KP	2KSC
S	60#	4BR	400KP	4KSC
B,S,V	100#	7BR	700KP	7KSC
B,S,V	200#	14BR	1400KP	14KSC
B,V	500#	35BR	3500KP	35KSC
B,V	1000#	70BR	7000KP	70KSC
B,V	2000#	140BR	14000KP	140KSC
B,V	5000#	350BR	35000KP	350KSC
B,V	7500#	500BR	50000KP	500KSC

8 - SETPOINT

5 characters maximum representing setpoint of the switch in the same units as the range of the switch. For setpoints in Vacuum specify as "–" pressure.

9 - SETPOINT DIRECTION

Code	Description
R	Rising Pressure (Increasing Pressure)
D	Decreasing Pressure

10 - OPTIONS

Code	Description
XC4	Individual certified calibration chart
XFP	Fungus proofing
XMQ	Positive material identification (75, 15 & 20 process conn. only)
XNC	2 wire leads plus ground wire – wired for normally closed operation
XNO	2 wire leads plus ground wire – wired for normally open operation
XNH	Stainless Steel tag
XNN	Paper tag
X6B	Cleaned for oxygen service
XGO	Ground Wire Omitted

Pressure Connection Notes:
*Available with "S" activator only.
†Ranges ≤500 psi.

Setpoint Notes:
If no setpoint is required on an APA switch use either "NSR" or "NSD". If direction is not known use "NSR" as the default.

Option Notes:
The X character will only appear before the first option, additional options will just be the two characters.
Example: XC4NC6B

If the switch is mounted to a diaphragm seal the seal fill fluid is glycerin standard.

TO ORDER THIS A-SERIES PRESSURE SWITCH:

Select: APS N7 1H 012C S 02 30# - 15 R - X6B

1. Function: APS
2. Enclosure: N7
3. Micro Switch: 1H
4. Electrical Connection: 012C
5. Actuator Seal: S
6. Pressure Connection: 02
7. Pressure Range: 30#
8. Setpoint: 15
9. Setpoint Direction: R
10. Options: X6B

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Pressure and Differential Pressure Switches, Watertight Enclosure, Type 400, B-Series

This general purpose Ashcroft® switch series is ideal for use in virtually all Industrial and OEM applications.

- ***Watertight NEMA 4X enclosure, IP66***
- ***Choice of switch elements for all applications, including hermetically sealed***
- ***Wide choice of wetted materials, including all-welded Monel or stainless steel***
- ***Fixed or limited adjustable deadband***
- ***Approved for UL, CSA and FM[8] ratings***
- ***Setpoints adjustable from 15-100% of range***
- ***Choice of actuators, including designs for fire-safe and NACE applications[8]***
- ***Readily available***
- ***Standard pressure connection materials:***
  - ***Pressure psi ranges - 316L stainless steel***
  - ***Differential psid ranges - Nickel-plated brass[9]***
  - ***Pressure and differential inches of water ranges - Epoxy coated carbon steel***

1 - ENCLOSURE

B4 - Pressure switch, type 400, watertight enclosure meets NEMA 3, 4, 4X and 13, IP66 requirements

D4 - Differential pressure switch, type 400, watertight enclosure meets NEMA 3, 4, 4X and 13, IP66 requirements

2 - SWITCH ELEMENTS

Order Code	Description/Maximum Electrical Ratings UL/CSA Listed SPDT	
20[4]	Narrow deadband	15A, 125/250 Vac
21[9]	Ammonia service	5A, 125/250 Vac
22[3]	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
23	Heavy duty ac	20A,125/250 Vac
24[1]	General purpose	15A,125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
25	Heavy duty dc	10A,125/ Vac or dc 1/8HP 125/ Vac or dc
26[4]	Sealed environment proof	15A, 125/250 Vac
27	High temp. 300°F	15A, 125/250 Vac
28	Manual reset trip on increasing	15A, 125/250 Vac
29	Manual reset trip on decreasing	15A, 125/250 Vac
31	Low level (gold) contacts	1A,125/250 Vac
32	Hermetically sealed switch, general purpose	11A, 125/250 Vac 5A, 30 Vdc
50	Variable deadband	15A,125/250 Vac
	UL/CSA Listed Dual SPDT[2]	
61[4]	Dual narrow deadband	15A, 125/250 Vac
62[4]	Dual narrow environment proof	15A, 125/250 Vac
63	Dual high temp. 300°F	15A, 125/250 Vac
64	Dual general purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
65	Dual ammonia service	5A, 125/250/480

3 - ACTUATOR SEAL[7]

Code & Material	Process Temp.[6] Limits °F	Range			
		Vac in.H_2O	0-600 psi	1000 psi	2000-3000 psi
B-Buna N	0 to 150	●	●	●	●
V-Viton	20 to 300	●	●	●	
T-Teflon	0 to 150	●	●	●	●
S-SS[5][10]	0 to 300		●	●	
P-Monel[5][10]	0 to 300		●	●	

4 - OPTIONS

(See pages 256-257)

5 - STANDARD PRESSURE RANGES

(See page 253)

NOTES:

1. Standard switch.
2. Dual switches are 2 SPDT snap-action switches not independently adjustable.
3. Estimated dc rating, 2.5A, 28 Vdc (not UL listed).
4. Estimated dc rating, .4A, 120 Vdc (not UL listed).
5. Available on pressure only.
6. Ambient operating temperature limits –20 to 150°F, all styles. Setpoint shift of ±1% of range per 50°F is normal. Switch calibrated at 70°F reference.
7. Items are wetted by process fluid.
8. Refer to Option Table.
9. Order Option XUD, stainless steel process connection.
10. On differential switches, stainless steel is available in 15, 30, 60 and 90 psid ranges only. Includes Teflon O-ring and 316 SS connection.

HERMETICALLY SEALED SWITCH

We recommend hermetically sealed switch elements for improved reliability. The hermetically sealed switch provides uncompromising contact protection in harsh or corrosive environments. The Ashcroft 400 Series is also approved for installation in Division II hazardous areas when supplied with hermetically sealed contacts.

Features:
- UL-recognized component, guide WSQ2, File E85076
- All-stainless steel welded construction

TO ORDER THIS B-SERIES PRESSURE SWITCH:

Select: **B4 20 B XPK 600#**

1. Enclosure: B4
2. Switch Element: 20
3. Actuator Seal: B
4. Options (See pages 256-257): XPK
5. Pressure Range (See page 253): 600#

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Pressure and Differential Pressure Switches, Explosion-Proof Enclosure, Type 700, B-Series

This broad Ashcroft® switch series is ideal for use in virtually all process and industrial applications.

- ***Explosion-proof NEMA 7/9, IP66 enclosure (explosion-proof enclosure Class I, Div. 1 & 2, Groups B, C, & D and Class II, Div. 1 & 2, Groups E, F & G)***
- ***Choice of switch elements for all applications, including hermetically sealed***
- ***Wide choice of wetted materials, including all-welded Monel or stainless steel***
- ***Fixed or limited adjustable deadband***
- ***UL listed***
- ***Various actuators available***
- ***Belleville actuator[8]***
- ***Readily available***
- ***Standard pressure connection materials:***
  - ***Pressure psi ranges - 316L SS***
  - ***Differential psid ranges - Nickel plated brass[9]***
  - ***Pressure and differential inches of water ranges - Epoxy coated carbon steel***
- ***ATEX models available[8]***
- ***IECEx models available[10]***
- ***CSA models available[8]***
- ***FM models available[8]***
- ***Setpoints adjustable from 15-100% of range***
- ***Dual Seal Rating models available[8]***

LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

ATEX model shown

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

1 - ENCLOSURE

B7 - Pressure switch, type 700, explosion-proof enclosure meets Div.1 & 2, NEMA 7/9, IP66 requirements

D7 - Differential pressure switch, type 700, explosion-proof enclosure meets Div. 1 & 2, NEMA 7/9, IP66 requirements

2 - SWITCH ELEMENTS

Order Code	Description/Maximum Electrical Ratings UL/CSA Listed SPDT	
20[4]	Narrow deadband	15A, 125/250 Vac
21[9]	Ammonia service	5A, 125/250 Vac
22[3]	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
23	Heavy duty ac	20A,125/250 Vac
24[1]	General purpose	15A,125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
25	Heavy duty dc	10A,125/ Vac or dc 1/8HP 125/ Vac or dc
26[4]	Sealed environment proof	15A, 125/250 Vac
27	High temp. 300°F	15A, 125/250 Vac
31	Low level (gold) contacts	1A,125/250 Vac
32	Hermetically sealed switch, general purpose	11A, 125/250 Vac 5A, 30 Vdc
50	Variable deadband	15A,125/250 Vac
	UL/CSA Listed Dual SPDT[2]	
61[4]	Dual narrow deadband	15A, 125/250 Vac
62[4]	Dual narrow environment proof	15A, 125/250 Vac
63	Dual high temp. 300°F	15A, 125/250 Vac
64	Dual general purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
65	Dual ammonia service	5A,125/250/480 Vac
67[3]	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
68	Dual hermetically sealed switch, general purpose	11A,125/250 Vac 5A, 30 Vdc

3 - ACTUATOR SEAL[7]

Code & Material	Process Temp.[6] Limits °F	Range			
		Vac in.H_2O	0-600 psi	1000 psi	2000-3000 psi
B-Buna N	0 to 150	●	●	●	●
V-Viton	20 to 300	●	●	●	
T-Teflon	0 to 150	●	●	●	●
S-SS[5][10]	0 to 300		●	●	
P-Monel[5]	0 to 300		●	●	

4 - OPTIONS

(See pages 256-257)

5 - STANDARD PRESSURE RANGES

(See page 253)

NOTES:

1. Standard switch.
2. Dual switches are 2 SPDT snap-action switches not independently adjustable.
3. Estimated dc rating, 2.5A, 28 Vdc (not UL listed).
4. Estimated dc rating, .4A, 120 Vdc (not UL listed).
5. Available on pressure only.
6. Ambient operating temperature limits –20 to 150°F, all styles. Setpoint shift of ±1% of range per 50°F is normal. Switch calibrated at 70°F reference.
7. Items are wetted by process fluid.
8. Refer to Option Table.
9. Order Option XUD, stainless steel process connection.
10. On differential switches, stainless steel is available in 15, 30, 60 and 90 psid ranges only. Includes Teflon O-ring and 316 SS connection.

ATEX APPROVAL FOR HAZARDOUS LOCATIONS

ATEX is a European designation that deals with standards for equipment and protective systems intended for use in potentially explosive atmospheres. This approval is required for switches intended for use in hazardous locations, especially important to OEMs who export to Europe and contractors specifying or purchasing products for European applications. XCN option adds special features to Ashcroft 700-Series switch enclosures that meet the requirements for the highest levels of security and danger, such as:

- Special locking device requiring an Allen wrench to remove cover
- Special vents that blow out should the diaphragm rupture, thus preventing pressure build-up in the enclosure
- Special conduit plug requiring an Allen wrench for removal
- Available on pressure, temperature and differential pressure models
- Meets Explosion Class EEx d IIC T6

LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

TO ORDER THIS B-SERIES PRESSURE SWITCH:

Select: **B7** **20** **B** **X06** **600#**

1. Enclosure:
2. Switch Element:
3. Actuator Seal:
4. Options (see pages 256-257):
5. Pressure Range (see page 253):

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

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) 378-8281 or visit our web site at
www.ashcroft.com

ASHCROFT®

Pressure and Differential Pressure Switches, Watertight 316 SS Enclosure, G-Series

This broad Ashcroft® switch series is easy to use and readily retrofits to virtually all process, industrial and OEM applications.

- ***Single or dual independently adjustable setpoints meet all setpoint requirements***
- ***Watertight NEMA 4X, IP65 enclosure***
- ***316 SS construction***
- ***Choice of switch elements for all applications, including hermetically sealed***
- ***Fixed or fully adjustable deadband***
- ***Approved for UL and CSA ratings***
- ***Wide choice of actuators, including designs for fire-safe and NACE applications(7)***
- ***Standard pressure connection materials:***
  - ***Pressure psi ranges***
    - 316L stainless steel
  - ***Differential psid ranges***
    - 316 stainless steel standard
  - ***Pressure and differential inches of water ranges***
    - 316 stainless steel standard
- ***Readily available***
- ***3A sanitary connection available(7)***
- ***Setpoints adjustable from 15-100% of range***

1 - FUNCTION

GPA - Pressure control, single setpoint, adjustable deadband

GPD - Pressure control, two independently adjustable setpoints, fixed deadband

GPS - Pressure control, single setpoint, fixed deadband

GDA - Differential pressure control, single setpoint, adjustable deadband

GDD - Differential pressure control, two independently adjustable setpoints, fixed deadband

GDS - Differential pressure control, single setpoint, fixed deadband

2 - ENCLOSURE

N4 - NEMA 4/4X, IP65 (watertight and corrosion resistant)

3 - SWITCH ELEMENTS FOR GPA & GDA CONTROLS

Code	Description/Maximum Electrical Ratings UL/CSA Listed	
H	General purpose	10A,125/250 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
J	Hermetically sealed switch, general purpose	11A, 125/250 Vac 5A, 30 Vdc

SWITCH ELEMENTS FOR GPD, GPS, GDD & GDS CONTROLS

Code		Switch Elements UL/CSA Listed	
Single (GS)	Dual (GD)		
K(4)	KK	Narrow deadband	15A, 125/250 Vac
F(4)	FF	Sealed environment proof	15A, 125/250 Vac
G(5)	GG	General purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
P(3)	PP	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
J	JJ	Hermetically sealed switch, general purpose	11A,125/250 Vac 5A, 30 Vdc

4 - ACTUATOR SEAL(1)

Code & Material	Process Temp.(2) Limits °F	Range			
		Vac. in.H2O	0-600 psi	1000 psi	2000-3000 psi
B-Buna N	0 to 150	●	●	●	●
V-Viton	20 to 300	●	●	●	
T-Teflon	0 to 150	●	●	●	●
S-SS(6)	0 to 300		●	●	
P-Monel(6)	0 to 300		●	●	

5 - PRESSURE PORT(1)

Order Code	
25	¼ NPT Female
06	¼ NPT Female and ½ NPT Male Combination
07	½ NPT Female

6 - OPTIONS

See pages 256-257

7 - STANDARD PRESSURE RANGES

See page 255

NOTES:

1. These items are wetted by process fluid.
2. Ambient operating temperature limits –20 to 150°F, all styles. Setpoint shift of ±1% of range per 50°F temperature change is normal. Switches calibrated at 70°F reference.
3. Estimated dc rating, 2.5A, 28 Vdc (not UL listed).
4. Estimated dc rating, .4A, 120 Vdc (not UL listed).
5. Not UL listed at 480 Vac.
6. Available on pressure only.
7. Refer to Option Table.

HERMETICALLY SEALED SWITCH

We recommend hermetically sealed switch elements for improved reliability. The hermetically sealed switch provides uncompromising contact protection in harsh or corrosive environments. The Ashcroft G Series is also approved for installation in Division II hazardous areas when supplied with hermetically sealed contacts.

Features:
- UL-recognized component, guide WSQ2, File E85076
- All-stainless steel welded construction

TO ORDER THIS G-SERIES PRESSURE SWITCH:

Select:	GPD	N4	GG	B	25	X07	30#
1. Function:							
2. Enclosure:							
3. Switch Element:							
4. Actuator Seal:							
5. Pressure Port:							
6. Options (see pages 256-257):							
7. Pressure Range (see page 255):							

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Hydraulic Pressure Switches, Watertight Enclosure, H-Series

This Ashcroft® specialty switch is designed for applications such as trash compactors, balers and similar types of hydraulic control systems.

- ***Watertight NEMA 4X, IP66 enclosure***
- ***High overpressure protection***
- ***Vibration resistant O-ring sealed piston actuator***
- ***Choice of switch elements for all applications, including hermetically sealed***
- ***Fixed or limited adjustable deadband***
- ***Readily available***
- ***Setpoints adjustable from 15-100% of range***

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

1 - FUNCTION

H4 - Hydraulic switch, type 400, watertight enclosure meets NEMA 4, 4X and 13, IP66 requirements

2 - SWITCH ELEMENTS

Order Code	Description/Maximum Electrical Ratings SPDT	
20[3]	Narrow deadband	15A, 125/250 Vac
23	Heavy duty ac	20A,125/250 Vac
24[1]	General purpose	15A,125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
25	Heavy duty dc	10A,125/ Vac or dc 1/8HP 125/ Vac or dc
26[3]	Sealed environment proof	15A, 125/250 Vac
27	High temp. 300°F	15A, 125/250 Vac
28	High limit, manual reset	15A, 125/250 Vac
32	Hermetically sealed, general purpose	11A, 125/250 Vac 5A, 30 Vdc
50	Variable deadband	15A, 125/250 Vac
	Dual SPDT[2]	
61[3]	Dual narrow deadband	15A, 125/250 Vac
62[3]	Dual narrow environment proof	15A, 125/250 Vac
63	Dual high temp. 300°F	15A, 125/250 Vac
64	Dual general purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc

3 - ACTUATOR SEAL

Order Code	
V-Viton	Viton O-ring, 304 SS press. conn. Connection style 1/4 NPT Female

4 - OPTIONS

(see pages 256-257)

5 - STANDARD PRESSURE RANGES

Range psi	Adjustable Setpoint Limits psi	Proof Pressure psi
1000	150-1000	12,000
2000	300-2000	12,000
3000	450-3000	12,000
5000	750-5000	10,000
7500	1125-7500	10,000

NOTES:

1. Standard switch.
2. Dual switches are 2 SPDT snap-action switches not independently adjustable.
3. Estimated dc rating, 0.4A, 120 Vdc (not UL listed).

TO ORDER THIS H-SERIES PRESSURE SWITCH:

Select: **H4** **24** **V** **XFS** **3000#**

1. Enclosure: **H4**
2. Switch Element: **24**
3. Actuator Seal: **V**
4. Options (see pages 256-257): **XFS**
5. Pressure Range (from table 5): **3000#**

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Pressure and Differential Pressure Switches, Watertight Enclosure, L-Series

This broad Ashcroft® switch series is easy to use and readily retrofits to virtually all process, industrial and OEM applications.

- ***Single or dual independently adjustable setpoints meet all setpoint requirements***
- ***Watertight NEMA 4X, IP66 enclosure***
- ***Choice of switch elements for all applications, including hermetically sealed***
- ***Fixed or adjustable deadband***
- ***Standard pressure connection materials:***

  Pressure psi ranges
  - 316L SS

  Differential psid ranges
  - Nickel-plated brass[7]

  Pressure and differential inches of water ranges
  - Epoxy coated carbon steel
- ***Approved for UL, CSA and FM[7] ratings***
- ***Wide choice of actuators, including designs for fire-safe and NACE applications[7]***
- ***Readily available***
- ***Setpoints adjustable from 15-100% of range***

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

1 - FUNCTION

LPA - Pressure control, single setpoint, adjustable deadband

LPD - Pressure control, two independently adjustable setpoints, fixed deadband

LPS - Pressure control, single setpoint, fixed deadband

LDA - Differential pressure control, single setpoint, adjustable deadband

LDD - Differential pressure control, two independently adjustable setpoints, fixed deadband

LDS - Differential pressure control, single setpoint, fixed deadband

2 - ENCLOSURE

N4 - NEMA 4/4X, IP66 (watertight and corrosion resistant)

3 - SWITCH ELEMENTS FOR LPA & LDA CONTROLS

Code	Description/Maximum Electrical Ratings UL/CSA Listed	
H	General purpose	10A,125/250 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
J	Hermetically sealed switch, general purpose	11A, 125/250 Vac 5A, 30 Vdc

SWITCH ELEMENTS FOR LPD, LPS, LDD & LDS CONTROLS

Code		Switch Elements UL/CSA Listed	
Single (PS)	Dual (PD)		
K[4]	KK	Narrow deadband	15A, 125/250 Vac
F[4]	FF	Sealed environment proof	15A, 125/250 Vac
G[5]	GG	General purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
P[3]	PP	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
J	JJ	Hermetically sealed switch, general purpose	11A,125/250 Vac 5A, 30 Vdc

4 - ACTUATOR SEAL[1]

Code & Material	Process Temp.[2] Limits °F	Range			
		Vac. in.H_2O	0-600 psi	1000 psi	2000-3000 psi
B-Buna N	0 to 150	●	●	●	●
V-Viton	20 to 300	●	●	●	
T-Teflon	0 to 150	●	●	●	●
S-SS[6],[8]	0 to 300		●	●	
P-Monel[6]	0 to 300		●	●	

5 - PRESSURE PORT[1]

Order Code	
25	¼ NPT Female
06	¼ NPT Female and ½ NPT Male Combination
07	½ NPT Female

6 - OPTIONS

See pages 256-257

7 - STANDARD PRESSURE RANGES

See page 255

NOTES:

1. These items are wetted by process fluid.
2. Ambient operating temperature limits –20 to 150°F, all styles. Setpoint shift of ±1% of range per 50°F temperature change is normal. Switches calibrated at 70°F reference.
3. Estimated dc rating, 2.5A, 28 Vdc (not UL listed).
4. Estimated dc rating, .4A, 120 Vdc (not UL listed).
5. Not UL listed at 480 Vac.
6. Available on pressure only.
7. Refer to Option Table.
8. Order Option XUD, stainless steel process connection.

HERMETICALLY SEALED SWITCH

We recommend hermetically sealed switch elements for improved reliability. The hermetically sealed switch provides uncompromising contact protection in harsh or corrosive environments. The Ashcroft L Series is also approved for installation in Division II hazardous areas when supplied with hermetically sealed contacts.

Features:
- UL-recognized component, guide WSQ2, File E85076
- All-stainless steel welded construction

TO ORDER THIS L-SERIES PRESSURE SWITCH:

Select: **LPD** **N4** **GG** **B** **25** **XK3** **30#**

1. Function:
2. Enclosure:
3. Switch Element:
4. Actuator Seal:
5. Pressure Port:
6. Options (see pages 256-257):
7. Pressure Range (see page 255):

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Electronic Pressure Switches, Watertight or Explosion-Proof Enclosure, N-Series

Special features:

- ***Ashcroft® K Series polysilicon thin film pressure sensor (transducer) for long, stable life (minimum 10 million cycles at rated load)***
- ***Setpoint repeatability of 0.5% of range***
- ***Choice of watertight, NEMA 4 or explosion-proof NEMA 7/9, IP66 enclosures for safety and reliability***
- ***Pressure setpoints to 20,000 psi***
- ***Deadbands adjustable between 0.1% and 95% of nominal range***
- ***Multi-turn potentiometers make setpoint and deadband adjustments easy***
- ***Status lights indicate switch state***
- ***Continuous power assures operation first time and every time even after years of inactivity***

Ideal for pressure alarm, shutdown, control on:

- ***Machine tools***
- ***Injection molding machines***
- ***Presses***
- ***Pumps***
- ***Hydraulic systems***
- ***Turbines and compressors***
- ***Most process applications***

NEMA 7 (N7) Model Shown

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

1 - FUNCTION

NPA - Single setpoint with adjustable deadband

2 - ENCLOSURE

N4	NEMA 4, IP66, watertight
N7	NEMA 7/9, IP66, explosion proof

3 - OUTPUT

D	SPDT Relay	10A, 250 Vac 10A, 30 Vdc
I	SPDT Relay and current output	10A, 250 Vac 10A, 30 Vdc and 4-20mA

4 - POWER REQUIREMENTS

Code	Power Supply
L	110 Vac, 50/60 Hz
C	24 Vdc
V	250 Vac, 50/60 Hz

5 - PRESSURE CONNECTIONS

Code	Description
S01	⅛ NPT male
S02	¼ NPT male
S03	⅛ NPT female
S04	¼ NPT female
S05	7/16-20 SAE-male
S06	½ NPT male
S07	¼ AMINCO-female
S08	7/16-20 SAE-J514-female

6 - OPTIONS

Code	Description
XEA	External adjustment (N4 only)

7 - STANDARD PRESSURE RANGES

Range psi	Setpoint(1) Limits psi	Proof psi	Burst psi
60	3-60	120	480
100	5-100	200	800
200	10-200	400	1600
300	15-300	600	2400
500	25-500	1000	4000
750	35-750	1500	6000
1000	50-1000	2000	8000
2000	100-2000	4000	16,000
3000	150-3000	4500	15,000
5000	250-5000	7500	25,000
7500	375-7500	9000	22,500
10,000(2)	500-10,000	12,000	30,000
15,000(2)	750-15,000	18,000	45,000
20,000(2)	1000-20,000	24,000	60,000

(1) Switch setpoint is adjustable throughout these limits.
(2) Pressure connection S07 only on these ranges.

NOTES:

Temperature Specifications (70°F ref.)
–20°F to 160°F ambient and process
Setpoint shift of up to 2% of range per 50°F change can be expected

OPTIONAL TRANSMITTER SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Accuracy Class (F.S.):	**1%**
Nonlinearity	
Terminal Point*	±0.7%
B.F.S.L.	±0.4%
Hysteresis	±0.2%
Nonrepeatability	±0.07%
Interchangeability	±1.0%

*Includes hysteresis

Stability: ±0.5% F.S./year

Durability: 10^8 cycles 20/80% F.S. with negligible performance change

Response Time: Less than 5msec

ENVIRONMENTAL CHARACTERISTICS

Temperature Limits:

Storage	–65/+250°F
Operating	–20/+180°F
Compensated	–20/+160°F

Thermal Coefficients (70°F ref.):

Accuracy	Zero and Span
1%	±0.040% F.S./°F

ELECTRICAL SPECIFICATIONS

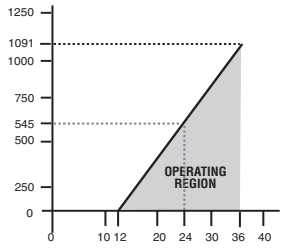
Output Signal: Supply Voltage:
4-20mA (2 wire)12-36 Vdc unregulated

MECHANICAL SPECIFICATIONS

Standard Construction Materials:
Wetted Parts:
Diaphragm – 17-4PH SS
Pressure Connection – 316SS

Reverse wiring protected.
Zero Offset: ±1.0%F.S.

Load Limitations 4-20mA Output
Loop Resistance ( )



V_{min} = 12V+ [.022A*(R_L)]
*Includes a 10% safety factor
$R_L = R_S + R_W$
R_L = Loop Resistance (ohms)
R_S = Sense Resistance (ohms)
R_W = Wire Resistance (ohms)

TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select: **NPA N4 D L S02 XEA 100#**

1. Function: **NPA**
2. Body: **N4**
3. Electrical Output: **D**
4. Power Requirements: **L**
5. Pressure Port: **S02**
6. Options (see table 6): **XEA**
7. Pressure Range (see table 7): **100#**

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Electronic Pressure Switches, Watertight Enclosure with Pressure Indication, N-Series

Ideal for pressure alarm, shutdown, control on:

- ***Machine tools***
- ***Injection molding machines***
- ***Presses***
- ***Pumps***
- ***Hydraulic systems***
- ***Turbines and compressors***
- ***Most process applications***

Special features:

- ***Ashcroft® K Series polysilicon thin film pressure sensor (transducer) for long, stable life (minimum 10 million cycles at rated load)***
- ***Setpoint repeatability of 0.5% of range***
- ***Watertight, NEMA 4X, IP66 enclosures for safety and reliability***
- ***Pressure setpoints to 20,000 psi***
- ***Deadbands adjustable between 0.5% and 95% of nominal range***
- ***Multi-turn potentiometers make setpoint and deadband adjustments easy***
- ***Status lights indicate switch state***
- ***Continuous power assures operation first time and every time even after years of inactivity***

IN A RUSH? ASK FOR ASHCROFT GOLD SERVICE

1 - FUNCTION

NPI - Single setpoint with adjustable deadband and indication

2 - ENCLOSURE

N4	NEMA 4, IP66, watertight

3 - OUTPUT

D	SPDT Relay	10A, 250 Vac 10A, 30 Vdc
I	SPDT Relay and current output	10A, 250 Vac 10A, 30 Vdc and 4-20mA

4 - POWER REQUIREMENTS

Code	Power Supply
L	110 Vac, 50/60 Hz
C	24 Vdc
V	250 Vac, 50/60 Hz

5 - PRESSURE CONNECTIONS

Code	Description
S01	⅛ NPT male
S02	¼ NPT male
S03	⅛ NPT female
S04	¼ NPT female
S05	7/16-20 SAE-male
S06	½ NPT male
S07	¼ AMINCO-female
S08	7/16-20 SAE-J514-female

6 - OPTIONS

Code	
XEA	External adjustment (N4 only)

7 - STANDARD PRESSURE RANGES

Range psi	Setpoint[1] Limits psi	Proof psi	Burst psi
60	3-60	120	480
100	5-100	200	800
200	10-200	400	1600
300	15-300	600	2400
500	25-500	1000	4000
750	35-750	1500	6000
1000	50-1000	2000	8000
2000	100-2000	4000	16,000
3000	150-3000	4500	15,000
5000	250-5000	7500	25,000
7500	375-7500	9000	22,500
10,000[2]	500-10,000	12,000	30,000
15,000[2]	750-15,000	18,000	45,000
20,000[2]	1000-20,000	24,000	60,000

(1) Switch setpoint is adjustable throughout these limits.
(2) Pressure connection S07 only on these ranges.

NOTES:

Temperature Specifications (70°F ref.)
–20°F to 160°F ambient and process
Setpoint shift of up to 2% of range per 50°F change can be expected

OPTIONAL TRANSMITTER SPECIFICATIONS

PERFORMANCE CHARACTERISTICS

Accuracy Class (F.S.):	1%
Nonlinearity	
Terminal Point*	±0.7%
B.F.S.L.	±0.4%
Hysteresis	±0.2%
Nonrepeatability	±0.07%
Interchangeability	±1.0%

*Includes hysteresis

Stability: ±0.5% F.S./year

Durability: 10^8 cycles 20/80% F.S. with negligible performance change

Response Time: Less than 5msec

ENVIRONMENTAL CHARACTERISTICS

Temperature Limits:

Storage	–65/+250°F
Operating	–20/+180°F
Compensated	–20/+160°F

Thermal Coefficients (70°F ref.):

Accuracy	Zero and Span
1%	±0.040% F.S./°F

ELECTRICAL SPECIFICATIONS

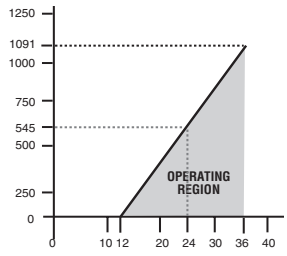
Output Signal: Supply Voltage:
4-20mA (2 wire)12-36 Vdc unregulated

MECHANICAL SPECIFICATIONS

Standard Construction Materials:
Wetted Parts:
Diaphragm – 17-4PH SS
Pressure Connection – 316SS

Reverse wiring protected.
Zero Offset: ±1.0%F.S.

Load Limitations 4-20mA Output
Loop Resistance ( )



V_{min} = 12V+ [.022A*(R_L)]
*Includes a 10% safety factor
$R_L = R_S + R_W$
R_L = Loop Resistance (ohms)
R_S = Sense Resistance (ohms)
R_W = Wire Resistance (ohms)

TO ORDER THIS N-SERIES PRESSURE SWITCH:

Select:	NPI	N4	D	L	S02	XEA	100#
1. Function:							
2. Body:							
3. Electrical Output:							
4. Power Requirements:							
5. Pressure Port:							
6. Options (see table 6):							
7. Pressure Range (see table 7):							

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Pressure and Differential Pressure Switches, Watertight and Explosion-Proof Enclosure, P-Series

This top-of-the-line Ashcroft® process switch series includes many state-of-the-art features for safety and reliability in virtually all process applications.

- ***Die cast aluminum enclosure is standard with NEMA 4X (weatherproof, corrosion resistant) NEMA 7 (explosion-proof enclosure Class I, Div. 1 & 2, Groups B, C & D and Class II, Div. 1 & 2, Groups E, F & G). Dual chamber design allows set-point changes to be made safely even with power connected.***
- ***Single or dual independently adjustable setpoints meet all setpoint requirements***
- ***UL, CSA[7] listed***
- ***Fixed or adjustable deadband***
- ***Readily available***
- ***Standard pressure connection materials:***
  - ***Pressure psi ranges - 316L stainless steel***
  - ***Differential pressure ranges - Nickel plated brass[8]***
  - ***Pressure and differential inches of water ranges - Epoxy coated carbon steel***
- ***Setpoints adjustable from 15-100% of range***
- ***Dual Seal Rating models available***

1 - FUNCTION

PPA - Pressure control, single setpoint, adjustable deadband

PPD - Pressure control, two independently adjustable setpoints, fixed deadband

PPS - Pressure control, single setpoint, fixed deadband

PDA - Differential pressure control, single setpoint, adjustable deadband

PDD - Differential pressure control, two independently adjustable setpoints, fixed deadband

PDS - Differential pressure control, single setpoint, fixed deadband

2 - ENCLOSURE

N7 - NEMA 7/9, IP65, watertight, corrosion resistant and explosion proof Div. 1 & 2

3 - SWITCH ELEMENTS FOR PPA & PDA CONTROLS

Code	Description/Maximum Electrical Ratings UL/CSA Listed	
H	General purpose	10A,125/250 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
J	Hermetically sealed switch, general purpose	11A, 125/250 Vac 5A, 30 Vdc

SWITCH ELEMENTS FOR PPD, PPS, PDD & PDS CONTROLS

Code		Switch Elements UL/CSA Listed	
Single (PS)	Dual (PD)		
K[4]	KK	Narrow deadband	15A, 125/250 Vac
F[4]	FF	Sealed environment proof	15A, 125/250 Vac
G[5]	GG	General purpose	15A, 125/250/480 Vac 1/2A, 125 Vdc 1/4A, 250 Vdc
P[3]	PP	Hermetically sealed switch, narrow deadband	5A, 125/250 Vac
J	JJ	Hermetically sealed switch, general purpose	11A,125/250 Vac 5A, 30 Vdc

4 - ACTUATOR SEAL[1]

Code & Material	Process Temp.[2] Limits °F	Range			
		Vac. in.H_2O	0-600 psi	1000 psi	2000-3000 psi
B-Buna N	0 to 150	●	●	●	●
V-Viton	20 to 300	●	●	●	
T-Teflon	0 to 150	●	●	●	●
S-SS[6][9]	0 to 300		●	●	
P-Monel[6]	0 to 300		●	●	

5 - PRESSURE PORT[1]

Order Code	
25	¼ NPT Female
06	¼ NPT Female and ½ NPT Male Combination
07	½ NPT Female

6 - OPTIONS

See pages 256-257

7 - STANDARD PRESSURE RANGES

See page 254

NOTES:

1. These items are wetted by process fluid.
2. Ambient operating temperature limits –20 to 150°F, all styles. Setpoint shift of ±1% of range per 50°F temperature change is normal. Switches calibrated at 70°F reference.
3. Estimated dc rating, 2.5A, 28 Vdc (not UL listed).
4. Estimated dc rating, .4A, 120 Vdc (not UL listed).
5. Not UL listed at 480 Vac.
6. Available on pressure only.
7. Refer to Option Table.
8. Order Option XUD, stainless steel process connection.
9. On differential switches, stainless steel is available in 15, 30, 60 and 90 psid ranges only. Includes Teflon O-ring and 316 SS connection.

HERMETICALLY SEALED SWITCH

We recommend hermetically sealed switch elements for improved reliability. The hermetically sealed switch provides uncompromising contact protection in harsh or corrosive environments.

Features:
- UL-recognized component, guide WSQ2, File E85076
- All-stainless steel welded construction

TO ORDER THIS P-SERIES PRESSURE SWITCH:

Select:	PPD	N7	GG	B	25	XK3	30#
1. Function:							
2. Enclosure:							
3. Switch Element:							
4. Actuator Seal:							
5. Pressure Port:							
6. Options (see pages 256-257):							
7. Pressure Range (see page 254):							

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

ASHCROFT®

Nominal Ranges and Deadbands Pressure and Temperature Switches, B-Series

PRESSURE/VACUUM SWITCHES

Nominal Range [1]			Overpressure Ratings		Approximate Deadband[2] Switch Element (Buna-N Diaphragm)				
			Proof psi	Burst psi	20, 26, 27	21, 24, 31	50	22	32, 42
Vacuum									
–30 in.Hg	–760 mmHg	–100 kPa	250	400	0.3-0.7	1.5-4.0	0.5-2.2	0.4-1.5	2.1-4.2
Compound									
–15 in.H_2O/	–375 mmH_2O/	–3.7 kPa	20	35	0.15-0.75/	1.5-2.5/	.45-2.0/	0.5-1.2/	2.1-3.5/
15 in.H_2O	375 mmH_2O	3.7 kPa			0.15-0.75	1.5-2.5	0.45-2.0	0.5-1.2	.2.1-3.5
–30 in.H_2O/	–760 mmH_2O/	–7.5 kPa	20	35	0.30-0.60/	1.5-2.5/	0.45-2.0/	0.5-1.5/	2.1-3.5/
30 in.H_2O	760 mmH_2O	7.5 kPa			0.30-0.60	1.5-2.5	0.45-2.0	0.5-1.5	2.1-3.5
–30 in.Hg/	–760 mmHg/	–100 kPa	250	400	0.5-1.0/	2.0-3.5/	0.75-2.5/	0.7-1.8/	2.8-4.2/
15 psi	1.0 kg/cm^2	100 kPa			0.3-0.7	0.5-2.0	0.5-1.0	0.5-1.4	0.7-2.1
–30 in.Hg/	–760 mmHg/	–100 kPa	250	400	1.0-1.5/	3.0-6.0/	1.2-4.5/	1.4-2.4/	4.2-8.4/
30 psi	2.0 kg/cm^2	200 kPa			0.3-0.8	1.0-2.0	0.7-1.5	0.4-1.3	1.4-2.8
–30 in.Hg/	–760m mmHg/	–100 kPa	250	400	2.0-3.0	5.0-9.0	2.5-7.0	2.8-4.5/	7.0-12.0
60 psi	4.0 kg/cm^2	400 kPa			0.7-1.5	3.0-5.0	1.1-4.0	1.0-2.3	4.2-7.0
Pressure									
10 in.H_2O	250 mmH_2O	2.5 kPa	20	35	0.2-0.5	1.0-2.0	0.35-1.5	0.4-1.0	1.4-2.8
30 in.H_2O	750 mmH_2O	7.5 kPa	20	35	0.3-0.6	1.5-2.5	4.5-2.0	0.5-2.0	2.1-3.5
60 in.H_2O	1500m mmH_2O	15 kPa	20	35	0.5-1.3	1.5-3.5	0.9-2.5	0.7-3.0	2.1-5.0
100 in.H_2O	2500 mmH_2O	25 kPa	20	35	0.6-1.6	2.5-5.5	1.1-4.0	1.0-4.0	3.5-7.7
150 in.H_2O	3750 mmH_2O	37 kPa	20	35	1.0-2.5	4.5-8.5	1.7-6.5	2.0-6.0	6.0-12.0
15 psi	1.0 kg/cm^2	100 kPa	500	1500	0.1-.35	0.5-1.5	0.2-1.0	0.4-1.0	0.7-2.1
30 psi	2.5 kg/cm^2	200 kPa	500	1500	0.1-.50	0.5-1.5	0.3-1.0	0.4-1.0	0.7-2.1
60 psi	4.0 kg/cm^2	400 kPa	500	1500	0.3-1.0	1.0-3.5	0.7-2.5	0.6-2.0	1.4-5.0
100 psi	7.0 kg/cm^2	700 kPa	1000	3000	0.5-1.7	1.5-5.0	1.1-3.5	1.0-4.5	2.1-7.0
200 psi	14 kg/cm^2	1400 kPa	1000	3000	1-3	5-13	2-9	3.0-7.5	7.0-18.2
400 psi	28 kg/cm^2	2800 kPa	2400	3000	4-7.5	5-24	5.5-15	4.0-11.0	7.0-33.6
600 psi	42 kg/cm^2	4200 kPa	2400	3000	4-11	9-30	7-20	5.0-23.0	12.6-42
1000 psi [8]	70 kg/cm^2	7000 kPa	12000	18000	7-30	30-110	18-70	15.0-60	42-154
3000 psi	210 kg/cm^2	21000 kPa	12000	18000	15-60	80-235	37-160	30.0-130.0	112-329

DIFFERENTIAL PRESSURE SWITCHES

Nominal Range [1]			Overpressure Ratings		Approximate Deadband[2,4] Switch Element (Buna-N Diaphragm)				
			Static psi	Proof psi	20, 26, 27	21, 24, 31	50	22	32, 42
30 in.H_2Od	750 mmH_2O	7.5 kPa	5.4	21.6	0.3-0.6	1.5-2.5	0.45-2.0	0.5-2.0	2.1-3.5
60 in.H_2Od	1500 mmH_2O	15 kPa	5.4	21.6	0.5-1.3	1.5-3.5	0.9-2.5	0.7-3.0	2.1-5.0
100 in.H_2Od	2500 mmH_2O	25 kPa	5.4	21.6	0.6-1.6	2.5-5.5	1.1-4.0	1.0-4.0	3.5-7.7
150 in.H_2Od	3750 mmH_2O	37 kPa	5.4	21.6	1.0-2.5	4.5-8.5	1.8-6.5	2.0-6.0	6.3-12.0
15 psid	1 kg/cm^2	100 kPa	500	2000	0.5-1.0	2.0-5.0	0.7-3.5	0.7-1.4	2.8-7.0
30 psid	2.5 kg/cm^2	200 kPa	500	2000	1.0-2.0	2.0-5.0	1.5-3.5	1.4-2.8	2.8-7.0
60 psid	4 kg/cm^2	400 kPa	500	2000	2.0-4.0	3.0-6.0	3.0-4.5	2.8-5.6	4.2-8.5
100 psid	7 kg/cm^2	700 kPa	1000	4000	4.0-10.0	11.0-20.0	7.0-15.0	6.0-14.0	16.0-28.0
200 psid	14 kg/cm^2	1400 kPa	1000	4000	5.0-15.0	12.0-40.0	10.0-86.0	7.0-21.0	17.0-56.0
400 psid	28 kg/cm^2	2800 kPa	1000	8000	10.0-20.0	20.0-60.0	15.0-40.0	14.0-28.0	28.0-84.0
600 psid	42 kg/cm^2	4200 kPa	1000	8000	20.0-40.0	80.0-150.0	30.0-115.0	30.0-56.0	112.0-210.0

TEMPERATURE RANGE SELECTION

Adjustable Range		Max. Temp. °F	Approximate Deadband[6] Switch Element				
°F	°C		20, 26, 27	21, 24, 31	50	22	32, 42
–40 to 60	–40 to16	400	1.0-2.0	3.0-8.0	1.5-5.5	1.4-6.0	8.0-16.0
0 to 100	–20 to 40	400	1.5-3.0	5.0-12.0	2.2-8.5	1.5-7.5	9.0-20.0
75 to 205	20 to 95	400	1.5-3.5	8.0-16.0	2.5-12.0	2.0-9.0	10.0-24.0
150 to 260	65 to125	400	1.5-3.0	5.0-12.0	2.2-8.5	2.0-9.0	10.0-24.0
235 to 375	110 to 190	500	1.5-3.5	5.0-12.0	2.2-8.5	2.0-9.0	10.0-24.0
350 to 525[7]	175 to 275	700	2.0-4.5	8.0-16.0	3.2-12.0	2.5-10.0	15.0-34.0
500 to 750[3]	260 to 400	900	4.0-8.0	16.0-30.0	7.0-24.0	5.0-23.0	30.0-50.0

NOTES:

1. Switches may generally be set between 15% and 100% of nominal range on increasing pressure. Consult factory for applications where setpoints must be lower.
2. All deadbands are given in English units as shown in the nominal range column. Deadbands shown are for switches with Buna N diaphragm.

   Approximate deadbands for optional diaphragms:
   Viton: Multiply Buna N value by 1.4
   Teflon: Multiply Buna N value by 1.2
   Stainless Steel: Multiply Buna N value by 1.7
   Monel: Multiply Buna N value by 1.7
3. Available with remote mount thermal system only.
4. Deadbands given are for zero static working pressure.
5. For approximate deadbands for dual switch elements, multiply the single switch element by 1.6.
6. All deadbands given in °F.
7. Not available with 2$^3/_4$″ stem.
8. Proof pressure is 4000 psi with stainless steel and monel welded diaphragms.

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Nominal Ranges and Deadbands Pressure and Temperature Switches, P-Series

PRESSURE/VACUUM SWITCHES

Nominal Range [1]			Overpressure Ratings Proof psi	Overpressure Ratings Burst psi	Approximate Deadband[2] Switch Element (Buna-N Diaphragm) PPA[3] Switch Element J, H	PPS[4] G	PPS[4] J, H	PPS[4] K, F	PPS[4] P	PPD[4] GG	PPD[4] JJ, HH	PPD[4] KK,FF	PPD[4] PP
Vacuum													
–30 in.Hg	–760 mmHg	–100 kPa	250	400	7-26	3-5	3-6.5	1-2	1-2.5	3-5	3-6.5	1-2	1.0-3.5
Compound													
–30 in.Hg/ 15 psi	–760 mmHg/ 1.0 kg/cm²	–100 kPa 100 kPa	250	400	10-25 4-13	3-5 1-2	2.5-3.5 1-3	1-2 0.5-2	1-2.5 0.5-2	3-5 2-4	2.5-4.5 1-3	1-2 0.5-1	1.0-3.5/ 1.0-2.8
Pressure													
30 in.H_2O	750 mmH_2O	7.5 kPa	20	35	4.-27	1.5-3.5	2-5	0.5-1	0.5-2	1.5-3.5	2-5	0.5-1	1.0-2.8
60 in.H_2O	1500 mmH_2O	15 kPa	20	35	5-54	1.5-3.5	2.5-5	0.5-2.0	1-2	1.5-3.5	2.5-5.0	.0.5-2.0	1.0-2.8
100 in.H_2O	2500 mmH_2O	25 kPa	20	35	8.5-90	4-6	4-8.5	1-2	1-3	4-7	4-8.5	1-2	2.0-4.2
150 in.H_2O	3750 mmH_2O	37 kPa	20	35	18-135	5-11	10-18	1.5-3	2-6	8-14	10-18	1.5-3	3.0-8.4
15 psi	1 kg/cm²	100 kPa	500	1500	2.5-13	1-2	1-0.5	0.5-1	0.5-2	1-2	1-3.0	0.5-1	1.0-2.8
30 psi	2.5 kg/cm²	200 kPa	500	1500	3.5-26	1-2.5	2-4.5	0.5-1.5	0.5-1.5	1-2.5	2-4.5	0.5-1.5	1.0-3.0
60 psi	4 kg/cm²	400 kPa	500	1500	6.5-54	2-4	4-7	1-2	1-2.5	2-4	4-7	1-2	2.0-3.5
100 psi	7 kg/cm²	700 kPa	1000	3000	10-90	5-7	5-10	1-2.5	2-4	5-7	5-10	1-2.5	2.0-5.6
200 psi	14 kg/cm²	1400 kPa	1000	3000	20-180	10-15	10-18	1-4	5-15	10-20	15-25	3-6	4.0-12.0
400 psi	28 kg/cm²	2800 kPa	2400	3000	45-360	16-30	16-45	4-8	5.0-15	16-30	16-45	4-8	5.0-21.0
600 psi	42 kg/cm²	4200 kPa	2400	3000	75-540	16-50	20-75	5-8	6-25	16-50	20-75	5-15	8.0-35.0
1000 psi [9]	70 kg/cm²	7000 kPa	12000	14000	160-900	75-130	50-160	7-30	10-85	75-130	50-160	7-30	20.0-119.0
2000 psi	140 kg/cm²	14000 kPa	12000	14000	350-1800	150-200	150-350	20-50	25-110	150-200	150-350	20-50	35.0-154.0
3000 psi	210 kg/cm²	21000 kPa	12000	14000	400-2600	180-250	180-400	30-70	30-190	180-250	180-400	30-70	40.0-266.0

DIFFERENTIAL PRESSURE SWITCHES

Nominal Range [1]		Static Working Pressure psi	Overpressure Ratings Proof psi	Approximate Deadband[2,6] Switch Element (Buna-N Diaphragm) PDA[3] Switch Element J, H	PDS[4] G	PDS[4] J, H	PDS[4] K, F	PDS[4] P	PDD[4] GG	PDD[4] JJ, HH	PDD[4] KK,FF	PDD[4] PP
30 in.H_2Od	750 mmH_2O	5.4	21.6	5.5-27	3-5	4-6.5	0.5-1	.5-2	3-5	4-6.5	0.5-1	1.0-2.8
60 in.H_2Od	1500 mmH_2O	5.4	21.6	5.5-54	3-5	4.5-6.5	0.5-2	1-2	3-5	4.-6.5	0.5-2	1.0-2.8
100 in.H_2Od	2500 mmH_2O	5.4	21.6	8.5-90	4-6	4.0-8.5	1-2	1-3	4-7	4.-8.5	1-2	2.0-4.2
150 in.H_2Od	3750 mmH_2O	5.4	21.6	18-135	5-11	10-18	1.5-3	2-6	8-14	10-18	1.5-3.	3.0-8.4
15 psid	2 kg/cm²	500	2000	2.5-13	1-2	1-3	0.5-1	0.5-2	1-2	1-3	0.5-1	1.0-2.8
30 psid	2 kg/cm²	500	2000	3.5-27	1-2.5	2-4.5	0.5-1	1-2	1-2.5	2-4.5	0.5-1.5	1.0-2.8
60 psid	4 kg/cm²	500	2000	6.5-54	2-4	4-7	1-1.5	1-2.5	1-2.4	4-7	1-2	1.0-3.5
100 psid	7 kg/cm²	500	2000	10-90	5-7	5-10	1-2.5	2-4	5-7	5-10	1-2.5	2.0-5.6
200 psid	14 kg/cm²	1000	4000	20-180	10-1 5	10-18	1-4	5-8	10-20	10-18	3-6	3.0-11.2
400 psid	28 kg/cm²	1000	8000	45-360	16-30	16-45	4-8	5-15	16-30	16-45	4-8	40.-21.0

TEMPERATURE RANGE SELECTION

NominalRange °F	NominalRange °C	Max. Temp. °F	Approximate Deadband (Buna N Diaphragm)[2] PTA[3] Switch Element J, H	PTS[4] G	PTS[4] J, H	PTS[4] K, F	PTS[4] P	PTD[4] GG	PTD[4] JJ, HH	PTD[4] KK, FF	PTD[4] PP
–40 to 60	–40 to16	400	18-90	2-10	9-18	1-2	1-5	2-10	9-18	1-2	2.0-7.0
0 to 100	–20 to 40	400	30-90	2-15	10-30	1-3	1.5-7	2-15	10-30	1.5-3	3.0-10.0
75 to 205	20 to 95	400	34-120	2-17	10-34	1.5-3.5	1.5-8	2-17	10-34	1.5-3.5	3.0-12.0
150 to 260	65 to125	400	25-100	2.5-12	9-25	1-2.5	1-7	2.5-12	9-25	1-2.5	3.0-10.0
235 to 375	110 to 190	500	35-130	2-18	10-35	1-3.5	1.5-8	2-18	10-35	1-3.5	3.0-12.0
350 to 525[8]	175 to 275	700	40-165	3-25	15-40	2-4.5	2.5-11	3-25	15-40	2-4.5	4.0-15.5
500 to 750[5]	200 to 400	900	50-200	20-36	36-60	5-10	6-21	20-36	36-60	5-10	7.0-30.0

NOTES:

1. Switches may generally be set between 15% and 100% of nominal range on increasing pressure. Consult factory for applications where setpoints must be lower.
2. All deadbands are given in English units as shown in the nominal range column. Deadbands shown are for switches with Buna N diaphragm.

Approximate deadbands for optional diaphragms:
Viton: Multiply Buna N value by 1.4
Teflon: Multiply Buna N value by 1.2
Stainless Steel: Multiply Buna N value by 1.7
Monel: Multiply Buna N value by 1.7

3. Deadbands for PTA, PPA and PDA are adjustable between the values shown.
4. Deadbands for PPS, PPD, PDS, PDD, PTD, and PDS models are fixed within the range of values shown.
5. Available with remote mount thermal system only.
6. Deadbands given are for zero static working pressure.
7. All deadbands given in °F.
8. Not available with 2¾″ stem.
9. Proof pressure is 4000 psi with stainless steel and monel welded diaphragms.

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Nominal Ranges and Deadbands Pressure and Temperature Switches, L- and G-Series

PRESSURE/VACUUM SWITCHES

Nominal Range [1]		Overpressure Ratings: Proof psi	Overpressure Ratings: Minimum Burst psi	Approximate Deadband[2] Switch Element (Buna-N Diaphragm): LPA-GPA[3] J, H	LPS-GPS[4] G	LPS-GPS[4] J, H	LPS-GPS[4] K, F	LPS-GPS[4] P	LPD-GPD[4] GG	LPD-GPD[4] JJ, HH	LPD-GPD[4] KK,FF	LPD-GPD[4] PP
Vacuum												
–30 in.Hg	–760 mmHg	250	400	6-24	2.5-4	4-6	1-2	1-2.5	3-5.5	4-6.5	1-2	1-2.5
Compound												
–30 in.Hg/ 15 psi	–760 mmHg/ 1.0 kg/cm²	250	400	6-24 3-12	2.5-4 1-2.5	4-6 1-3.5	1-2 0.5-1.5	1-2.5 0.5-2	3-5.5 1.5-3.5	4-6.5 1.5-4	1-2 1-2	1-2.5 1-2
Pressure												
30 in.H_2O	750 mmH_2O	20	35	4.0-27	1.5-3.5	2.0-4.0	0.5-1.0	0.7-2.0	2.1-4.9	2.8-5.6	0.7-1.4	0.7-2.8
60 in.H_2O	1500 mmH_2O	20	35	5.0-54	1.5-4.	2.5-5.0	0.5-1.4	1.0-2.5	3-5.6	3.5-7.0	0.7-2.0	2-3.5
100 in.H_2O	2500 mmH_2O	20	35	8.5-90	2.0-5.5	4.0-8.5	1.0-2.0	1.4-3.0	4-7.7	5.6-11.7	1.4-2.8	2-4.2
150 in.H_2O	3750 mmH_2O	20	35	18-135	5.0-11	10-18	1.5-3.0	2.0-6.0	7.0-16	14-25.1	2.1-4.2	5-9.2
15 psi	1 kg/cm²	500	1500	2.5-13	1.0-1.5	1.0-2.5	0.5-1.0	0.75-1.5	1.4-2.1	1.4-3.5	.7-1.4	1-1.4
30 psi	2 kg/cm²	500	1500	3.0-27	1.0-2.8	1.0-3.2	.75-1.5	1-1.8	1.4-5	3-6	1-2.1	1.4-2.5
60 psi	4 kg/cm²	500	1500	5.0-54	2.0-4.0	2.0-4.5	1.0-2.0	1.0-2.5	3-7	4-8	1.4-2.8	1.4-3.5
100 psi	7 kg/cm²	1000	3000	10-90	3-6	5.0-10	1.0-2.5	1.4-3.2	7-12	7.0-14	1.4-3.5	3-7
200 psi	14 kg/cm²	1000	3000	18-180	7-14	10-18	1.0-4.0	5.0-8.0	10-23	14-25	1.4-5.6	7.0-11.2
400 psi	28 kg/cm²	2400	3000	45-360	16-30	16-45	4.0-8.0	5.0-15	22-42	22-63	5.6-11.2	7.0-21
600 psi	42 kg/cm²	2400	3000	75-540	16-50	20-75	5.0-15	6.0-25	22-70	28-105	7.0-21	8.0-35
1000 psi[10]	70 kg/cm²	12000	14000	160-900	75-130	50-160	7.0-30	10-85	70-180	70-223	10-42	14-119
2000 psi	140 kg/cm²	12000	14000	350-1800	150-200	150-350	20-50	25-110	209-279	209-488	28-70	35-154
3000 psi	210 kg/cm²	12000	14000	400-2600	180-250	180-400	30-70	30-190	251-349	251-558	42-98	42-226

DIFFERENTIAL PRESSURE SWITCHES

Nominal Range [1]		Overpressure Ratings: Static psi	Overpressure Ratings: Minimum Proof psi	Approximate Deadband[2,7] Switch Element (Buna-N Diaphragm): LDA-GDA[3] J, H	LDS-GDS[4] G	LDS-GDS[4] J, H	LDS-GDS[4] K, F	LDS-GDS[4] P	LDD-GDD[4] GG	LDD-GDD[4] JJ, HH	LDD-GDD[4] KK,FF	LDD-GDD[4] PP
Pressure												
30 in.H_2Od	750 mmH_2O	5.4	21.6	4.0-27	1.5-3.5	2.0-4.0	0.5-1.0	0.7-2.0	2.1-4.9	2.8-5.6	0.7-1.4	0.7-2.8
60 in.H_2Od	1500 mmH_2O	5.4	21.6	5.0-54	1.5-4.0	2.5-5.0	0.5-1.4	1.0-2.5	2.5-6	3.5-7.0	0.7-2.0	2-3.5
100 in.H_2Od	2500 mmH_2O	5.4	21.6	8.5-90	4.0-5.5	4.0-8.5	1.0-2.0	1.4-3.0	5.6-7.7	5.6-11.9	1.4-2.8	2-4.2
150 in.H_2Od	3750 mmH_2O	5.4	21.6	18-135	5.0-11	10-18	1.5-3.0	2.0-6.0	7.0-15.4	14-25.2	2.1-4.2	2.8-8.4
30 psid	2 kg/cm²	500	2000	3.0-27	1.0-2.5	1.0-3.0	1.0-1.5	1.0-1.8	2-5	3-6	1-2.1	1.4-2.4
60 psid	4 kg/cm²	500	2000	5-54	2-4	2-4.5	1-2	1-2.5	3-7	4-8	1.4-2.8	1.4-3.5
200 psid	14 kg/cm²	1000	4000	18-180	10-15	10-18	1.0-4.0	5.0-8.0	14-23	14-30	1.4-5.6	7.0-11.2
400 psid	28 kg/cm²	1000	8000	45-360	16-30	16-45	4.0-8.0	5.0-15	22.4-42	22.4-36	5.6-11.2	7.0-21.0

TEMPERATURE RANGE SELECTION

AdjustableRa nge °F	AdjustableRa nge °C	Max. Temp. °F	ApproximateD eadband[8] Switch Element: LTA-GTA[3] J, H	LTS-GTS[4] G	LTS-GTS[4] J, H	LTS-GTS[4] K, F	LTS-GTS[4] P	LTD-GTD[4] GG	LTD-GTD[4] JJ, HH	LTD-GTD[4] KK,FF	LTD-GTD[4] PP
–40 to 60	–40 to16	400	18-90	4.0-10	9.0-18	1.5-3	2-5	4-10	9.0-18	1.5-3	2-5
0 to 100	–20 to 40	400	30-90	5.0-15	10-30	1.5-5.5	3-7	5-15	10-30	1.5-4.5	3-7
75 to 205	20 to 95	400	34-120	6.0-18	10-34	3-5.5	3-8	6-18	10-34	3-5.5	3-8
150 to 260	65 to125	400	25-100	3-13	9.0-25	1.5-4	3-7	3-13	9.0-25	1.5-4	3-7
235 to 375	110 to 190	500	35-130	6-19	10-35	2-5.5	3-8	6-17	10-35	2-5.5	3-8
350 to 525[9]	175 to 275	700	40-165	5-27	15-40	3-7	3.5-11	5-27	15-40	3-7	3.5-11
500 to 750[6]	260 to 400	900	50-200	20-36	5-10	6-21	20-36	20-36	36-60	5-10	6-21

NOTES:

1. Switches may generally be set between 15% and 100% of nominal range on increasing pressure. Consult factory for applications where setpoints must be lower.
2. All deadbands are given in English units as shown in the nominal range column. Deadbands shown are for switches with Buna N diaphragm.
   Approximate deadbands for optional diaphragms:
   Viton: Multiply Buna N value by 1.4
   Teflon: Multiply Buna N value by 1.2
   Stainless Steel: Multiply Buna N value by 1.7
   Monel: Multiply Buna N value by 1.7
3. Deadbands for LTA, LPA and LDA are adjustable between the values shown for all diaphragm materials.
4. Deadbands for LPS, LPD, LDS, LDD, LTD, and LDS models are fixed within the range of values shown.
5. Switches can be set at increase or decrease throughout the nominal range.
6. Available with remote mount thermal system only.
7. Deadbands given are for zero static working pressure.
8. All deadbands given in °F.
9. Not available with 2¾″ stem.
10. Proof pressure is 4000 psi with stainless steel and monel welded diaphragms.

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at
www.ashcroft.com

ASHCROFT®

Pressure, Differential Pressure and Temperature Switch Options for A, B, L, P, G, F, N, H Series

PRESSURE SWITCH OPTIONS (ALL SERIES)

OPTION CODE	DESCRIPTION	SWITCH SERIES A	B	L	P	G	F	N	H	NOTES
XBP	Wall mounting bracket (˝H_2O)		●	STD	STD	STD				
XBX	69C bushing (SS)									Assembled to capillary. Remote Temperature only.
XCH	Chained cover		●	●	●	●		●	●	
XCN	ATEX approval on 700 Series		●							
XC8	CSA approval	STD	●	STD	●	STD	STD			Standard on NEMA 4 enclosures. F series and A series.
XD2	Dual seal rating		●		●					
XFM	FM approval – Single element – Dual element		● ●	● ●						N/A on temperature switches.
XFP	Fungus proofing	●	●	●	●	●	●	●	●	
XFS	Factory adjusted setpoint		●	●	●	●	●	●	●	Setpoint must be given as well as increase or decrease.
XG3	Belleville actuator		●							Setpoint limits reduced to 30% to 100% of range.
XG5	Gas/oil UL limit differential pressure control to 150˝ H_2O		●	●						Buna N & Viton diaphragm only. B400 & LDS single setpoint only. N/A w/code 22, 32, P or J switch elements.
XG6	Gas/oil UL limit pressure control to 600 psi		●	●						Buna N and Viton diaphragm only.
XG7	Special actuator with redundant seal design (SS primary diaphragm)		●							B700 switch only. UL listed.
XG8	Steam limit pressure control to 300 psi		●	●						Stainless steel or Viton diaphragm only.
XG9	Fire safe actuator		●	●	●	●				Stainless steel diaphragm only.
XHS	High static differential		●	●	●					Available with Buna N and Viton diaphragms only. 15 psid and 30 psid only.
XHX	40 psi static pressure/dp only 160 psi proof pressure/dp only 100 psi proof pressure/press only Inches of water ranges		●	●	●	●				
XJK	Left side conduit connection		●	●				●	●	Standard on 700 series. N/A with DPDT element on 400s.
XJL	¾˝ to ½˝ conduit reducing bushing		●	●	●	●		●	●	
XK3	Terminal block		●	●	●	●	●			Terminal blocks standard with dual switches on B700 series. N/A on B400 series.
XLE	6 foot leads on the micro switch		●	●	●	●	●		●	
XMD	Metric range on label		●	●	●	●			●	Specify units to be printed on labels.
XNH	Stainless steel tagging	●	●	●	●	●	●	●	●	Specify tag information.
XNN	Paper tag		●	●	●	●	●	●	●	Specify tag information.
XPJ	24 Vdc pilot light(s) – Single – Dual		● ●	● ●					●	N/A on B700 series.
XPK	Pilot light(s), top mounted		●	●					●	N/A on B700 series.
XPM	¾˝ sealed conduit connection with 16˝ lead wires		●	●	●	●	STD		●	
XRN	Range scale		●							Standard on L, G, P & F series.
XTA	316 SS pressure port(s) for in H_2O ranges		●	●	●	STD				

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Pressure, Differential Pressure and Temperature Switch Options for A, B, L, P, G, F, N, H Series

PRESSURE SWITCH OPTIONS (ALL SERIES)

OPTION CODE	DESCRIPTION	SWITCH SERIES A	B	L	P	G	F	N	H	NOTES
XTM	2″ pipe mounting bracket		●	●	●	●		●		
XUD	316 stainless steel diff. press. conn.		●	●	●	STD				
XUX	IECEx approval (700 series)		●							
XO6	Pressure connection: ½ NPT male, ¼ NPT female combination		●	●	●	●	N/A	●		Standard with 1000, 2000 and 3000 psi ranges. Bottom connection only on D/P ″H_2O ranges.
XO7	Pressure connection: ½ NPT female		●	●	●	●	STD			
X2C	DPDT with single setpoint adjustment			●		●				Available with LPS, LDS, LTS, GPS, GTS and GDS models.
X3AY5	1.5″ Sanitary seal approved by 3A council		●	●		●				
X3AY6	2″ Sanitary seal approved by 3A council		●	●		●				
X6B	Cleaned for oxygen service	●	●	●	●	●	●	●		N/A with Buna N diaphragm.
	Diaphragm seals	●	●	●	●	●	●	●		
XNC	Normally Closed operation – with ground wire (NO wire omitted)	●					●			
XNO	Normally Open operation – with ground wire (NC wire omitted)	●					●			
XGO	Ground wire omitted	●					●			

ASHCROFT®

DDS-Series Differential Pressure Switch Diaphragm Sensing Element

The DDS-Series differential pressure switch is designed to sense low differential pressures between high pressure sources. The high pressure seals are opposed stainless steel bellows assemblies, while the differential pressure is sensed by a diaphragm clamped between these bellows assemblies.

The diaphragm has a large area to accurately sense low differential pressure, and during an over-pressure the diaphragm is fully supported.

The design is symmetric such that both the high or low pressure sides of the element can withstand the maximum pressure with the opposite side at atmospheric pressure. The rugged cast aluminum housing incorporates a "frictionless" switching mechanism, and can be specified as watertight or explosion proof. The housing is large enough to accommodate up to one full size SPDT or one DPDT electric switches.

250 psi DDS-Series Differential Pressure Switch

15000 psi DDS-Series Differential Pressure Switch

1 & 2 FUNCTION/ENCLOSURE

Code	Description
DDSN4 -	Single setpoint / fixed deadband Watertight NEMA 4X housing
DDSN7 -	Single setpoint / fixed deadband Explosion Proof, Class 1, Groups C & D, Class 2 Groups E, F & G

3 MICRO SWITCH

Code	Description
1G -	General Purpose, SPDT – 15A @ 125/250/480 VAC
2G -	General Purpose, DPDT – 15A @ 125/250/480 VAC
1K -	Narrow Deadband, SPDT - 15A @ 125/250/480 VAC
2K -	Narrow Deadband, DPDT – 15A @ 125/250/480 VAC
1M -	Gold Contact, SPDT –1 A @ 125 VAC
2M -	Gold Contact, DPDT – 1 A @ 125 VAC
1J -	Hermetically Sealed, SPDT - 1A @125 VAC, 1A @ 28 VDC resistive, 0.5A @ 28 VDC Inductive
2J -	Hermetically Sealed, DPDT - 1A @125 VAC, 1A @ 28 VDC resistive, 0.5A @ 28 VDC Inductive

4 ELECTRICAL CONNECTION

All models have 1¾ NPT Female conduit connection

Code	Description
S -	Screw Terminals on Micro Switch

5 ACTUATOR SEAL

Code	Description
B -	Buna N
V -	Viton (not available with 1500 psi static range H)
T -	Teflon

6 LOWER HOUSING MATERIAL

Code	Description
A -	Aluminum housing and process connections
S -	316 SS housing and process connections

7 PRESSURE CONNECTION

Code	Description
25 -	¼˝ NPT Female

8 STATIC PRESSURE RANGE

Code	Description
L -	250 psi maximum static pressure
H -	1500 psi maximum static pressure

9 STATIC PRESSURE SETPOINT

Code	Description
_____ -	Setpoint Static Pressure (5 characters maximum)
NSR -	No static sepoint required

10 RANGE

Inches of Water Differential	mBar Differential	mmH₂O Differential	kPa Differential
6IWD	15MBD	150MWD	1.5KPD
15IWD	35MBD	350MWD	3.5KPD
30IWD	75MBD	750MWD	7.5KPD
60IWD	150MBD	1500MWD	15KPD
100IWD	250MBD	2500MWD	25KPD
150IWD	350MBD	3500MWD	35KPD

11 & 12 SETPOINT/DIRECTION

Code	Description
_____**R** -	Factory-set Rising (Increasing) setpoint (5 characters maximum)
_____**D** -	Factory-Set Decreasing setpoint (5 characters maximum)
NSR -	Not factory set

13 OPTIONS

Code	Description
XNH -	Stainless Steel tag wired to case
XJK -	Dual ¾ NPT Female conduit connections
XC4 -	Certified Calibration Report

MAXIMUM DEADBAND I IWD PER MICRO SWITCH TYPE FOR 250 PSI STATIC RANGE

Range (IWD)	1K	1G	1M	1J	2K	2G	2M	2J
0-6	0.3	0.5	0.5	3.0	0.6	1.0	1.0	6.0
0-15	0.4	0.7	0.7	4.2	0.8	1.4	1.4	8.4
0-30	0.6	1.2	1.2	7.2	1.2	2.4	2.4	14.4
0-60	0.7	1.4	1.4	8.4	1.4	2.8	2.8	16.8
0-100	0.8	1.6	1.6	9.6	1.6	3.2	.2	19.2
0-150	1.2	2.5	2.5	15.0	2.4	5.0	5.0	30.0

MAXIMUM DEADBAND I IWD PER MICRO SWITCH TYPE FOR 250 PSI STATIC RANGE

Range (IWD)	1K	1G	1M	1J	2K	2G	2M	2J
0-6	1.1	2.2	2.2	6.6	2.2	4.4	4.4	13.2
0-15	1.2	2.3	2.3	6.9	2.4	4.6	4.6	13.8
0-30	1.2	2.3	2.3	6.9	2.4	4.6	4.6	13.8
0-60	1.3	2.5	2.5	7.5	2.6	5.0	5.0	15.0
0-100	1.5	2.9	2.9	8.7	3.0	5.8	5.8	17.4
0-150	1.7	3.4	3.4	10.2	3.4	6.8	6.8	20.4

TO ORDER THIS DDS-SERIES PRESSURE SWITCH DIAPHRAGM SENSING ELEMENT:

Part No.: **DDS N4 1G S B A 25 L 100# - 60IWD 15 R - XC4**

1. Function: DDS
2. Enclosure: N4
3. Micro Switch: 1G
4. Electrical Connection: S
5. Actuator Seal: B
6. Lower Housing Material: A
7. Pressure Connection: 25
8. Static Pressure Range: L
9. Static Pressure Setpoint: 100#
10. Pressure Range: 60IWD
11. Setpoint: 15
12. Setpoint Direction: R
13. Options: XC4

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