

F-Series Pressure Switches

FEATURES

- Explosion proof enclosure with hermetically sealed micro switches
- Dual chamber for safety
- Precision SPDT or DPDT snap-acting micro switch
- Setpoint adjustable from 15-100% of range
- Wide selection of switch elements

TYPICAL USES


- Offshore oil rigs
- Chemical and petrochemical plants
- Water and wastewater pressure control
- Pulp and paper
- Pipelines
- Corrosive and hazardous locations
- Engines, compressors and turbines
- Specialized OEM equipment



F-Series
Explosion-Proof Enclosure



SPECIFICATIONS

| | |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Setpoint Repeatability: | ±1% of span (additional setpoint shift of ±1% of range per 50 °F from initial setpoint set at 70 °F typical) |
| Switch Type: | 1 SPDT or 2 SPDT acting as DPDT |
| Setpoint: | Single setpoint - Factory set or field adjustable |
| Deadband: | Fixed |
| Ambient Temperature Range: | -20 °F to 150 °F |
| Enclosure Ratings: | NEMA 3, 4, 7, 9, IP66 |
| Enclosure Material | Anodized aluminum |
| Electrical Connection: | ½ NPT Male with 18" wire leads |
| Process Connection | ¼ NPT Female, ½ NPT Female |
| Size: | |
| Approvals: | UL, CSA, CE/UKCA |
| |  LISTED CLASS I DIV 1, DIV 2 GROUPS A, B, C, & D CLASS I-I DIV 1 GROUPS E, F, & G |

KEY BENEFITS

- Compact design
- Hermetically sealed micro switches offer improved reliability and safety
- Designed for applications such as alarm, shutdown, control and interlock

WETTED COMPONENTS

| Actuator Seal | Process Connection |
|------------------------------------------------------------------------|---------------------|
| Buna-N, Teflon™, Viton™, 316L SS, Stainless steel Piston/Viton™ O-Ring | 316 Stainless steel |

F-Series Pressure Switches

| NOMINAL RANGE AND PERFORMANCE TABLE Buna-N (CODE B) | | | | |
|--------------------------------------------------------|-----|--------------|---------------------------------|-----------|
| Nominal Ranges | | Proof Press. | Deadband (by Switch Element) | |
| psi | bar | | Code J | Code P, L |
| 30 IMV | -1 | 1,000 | 1.8-8.0 | 0.4-5.0 |
| 30# | 2 | 1,000 | 0.2-1.5 | 0.1-1.3 |
| 60# | 4 | 1,000 | 0.2-2.5 | 0.3-1.5 |
| 100# | 7 | 1,000 | 0.5-4.0 | 0.5-2.5 |
| 200# | 14 | 1,000 | 1.5-8.0 | 0.5-5.0 |
| 400# | 28 | 1,600 | 3.0-15.0 | 1.5-9.0 |
| 600# | 40 | 2,400 | 4.0-28.0 | 2.0-15.0 |
| 1000# | 70 | 4,000 | 6.0-50.0 | 3.0-30.0 |

| NOMINAL RANGE AND PERFORMANCE TABLE HIGH PRESSURE (CODE H) | | | | |
|---------------------------------------------------------------|-----|--------------|---------------------------------|-----------|
| Nominal Ranges | | Proof Press. | Deadband (by Switch Element) | |
| psi | bar | | Code J | Code P, L |
| 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 |

| NOMINAL RANGE AND PERFORMANCE TABLE WELDED STAINLESS STEEL (CODE S) | | | | |
|------------------------------------------------------------------------|-----|--------------|---------------------------------|-----------|
| Nominal Ranges | | Proof Press. | Deadband (by Switch Element) | |
| psi | bar | | Code J | Code P, L |
| 30# | 2 | 1,000 | 1.0-4.5 | 0.5-3.5 |
| 60# | 4 | 1,000 | 1.0-5.0 | 0.5-4.0 |
| 100# | 7 | 1,000 | 1.5-10.0 | 1.0-6.0 |
| 200# | 14 | 1,000 | 2.0-18.0 | 1.0-12.0 |
| 400# | 28 | 1,600 | 5.0-32.0 | 2.0-20.0 |
| 600# | 40 | 2,400 | 9.0-50.0 | 4.0-30.0 |
| 1000# | 70 | 4,000 | 15.0-80.0 | 7.0-50.0 |

NOTE: Setpoint adjustability for welded Stainless steel is 20-100% of range increasing

| NOMINAL RANGE AND PERFORMANCE TABLE VITON™, TEFLON™, SS w/VITON™ O-RING (CODES V, T & R) | | | | |
|------------------------------------------------------------------------------------------------|-----|--------------|---------------------------------|-----------|
| Nominal Ranges | | Proof Press. | Deadband (by Switch Element) | |
| psi | bar | | Code J | Code P, L |
| 30 IMV | -1 | 1,000 | 1.5-10.0 | 0.5-7.0 |
| 30# | 2 | 1,000 | 0.5-3.5 | 0.2-2.5 |
| 60# | 4 | 1,000 | 0.5-4.0 | 0.5-3.0 |
| 100# | 7 | 1,000 | 1.0-7.0 | 1.0-4.5 |
| 200# | 14 | 1,000 | 2.5-12.0 | 1.0-8.5 |
| 400# | 28 | 1,600 | 5.0-30.0 | 2.0-17.0 |
| 600# | 40 | 2,400 | 8.0-48.0 | 4.0-34.0 |
| 1000# | 70 | 4,000 | 10.0-80.0 | 5.0-55.0 |

Data Sheet

F-Series Pressure Switches

| ORDERING CODE | Example: | FPS | N7 | P | B | 25 | XFS | 100# |
|------------------------------------------------------------------------------|--------------------|-----------------|----|---|---|----|------|------|
| Function | | | | | | | | |
| FPS - Single setpoint, fixed deadband | | FPS | | | | | | |
| Enclosure | | | | | | | | |
| N7 - NEMA 3, 4, 7, 9 & IP66, anodized aluminum for hazardous locations N7 | | | | | | | | |
| Switch Elements, UL/CSA Listed | | | | | | | | |
| P - Hermetically sealed, narrow deadband - 5A, - 125/250 Vac | | | | P | | | | |
| J - Hermetically sealed, general purpose - 11A, - 125/250 Vac, 5A, 30Vdc | | | | | | | | |
| L - Hermetically sealed, gold contacts, 1A - 125 Vac | | | | | | | | |
| JJ - Dual hermetically sealed, general purpose, 11A, 125/250 Vac, 5A, 30 Vdc | | | | | | | | |
| LL - Dual hermetically sealed, gold contacts, 1A - 125 Vac | | | | | | | | |
| Actuator Seal | | | | | | | | |
| | Temperature Limits | | | | | | | |
| Material | Ambient | Process | | | | | | |
| B - Buna-N | -20 °F to 150 °F | 0 °F to 150 °F | | B | | | | |
| V - Viton™ | -20 °F to 150 °F | 20 °F to 200 °F | | | | | | |
| T - Teflon™ | -20 °F to 150 °F | 0 °F to 150 °F | | | | | | |
| R - SS diaphragm/Viton™ O-ring | -20 °F to 150 °F | 0 °F to 150 °F | | | | | | |
| S - 316L Stainless steel | -20 °F to 150 °F | 20 °F to 200 °F | | | | | | |
| H - SS piston/Viton™ O-ring | -20 °F to 150 °F | 20 °F to 200 °F | | | | | | |
| Process Connections | | | | | | | | |
| 25 - ¼ NPT Female | | | | | | 25 | | |
| 07- ½ NPT Female | | | | | | | | |
| 20 - 7/16-20 SAE, Female | | | | | | | | |
| Options (if choosing an option(s) must include an "X") | | | | | | | X_ _ | |
| FP - Fungus proofing | | | | | | | | |
| FS - Factory adjusted setpoint | | | | | | | FS | |
| K3 - Terminal blocks | | | | | | | | |
| LE - 6ft wire leads | | | | | | | | |
| NH - Stainless steel tag | | | | | | | | |
| 6B - Clean for oxygen service | | | | | | | | |
| C4 - Traceable calibration certificate | | | | | | | | |
| Pressure Range (select from pressure range table on page 2) | | | | | | | | |
| 100# - 100 psi | | | | | | | | 100# |

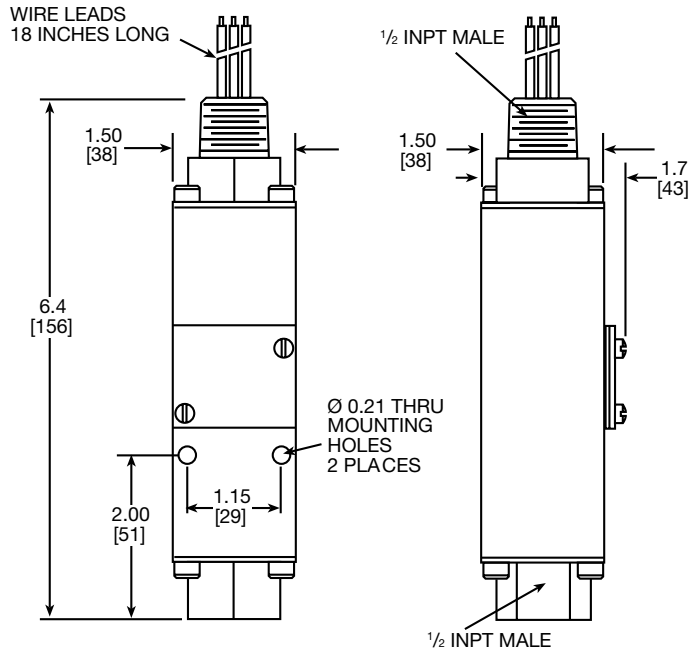
Data Sheet

F-Series Pressure Switches

DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

Pressure Switch



Pressure Switch with XK3

