EIGHT STEPS TO SELECTING A PRESSURE, DIFFERENTIAL PRESSURE OR TEMPERATURE SWITCH

Ashcroft offers several different pressure, differential pressure and temperature switch models. This guide will help you select the best model for your application. In many cases there may be more than one choice, so the lower cost option is usually the best choice. As a guideline a NEMA 7 rated switch will cost more than a NEMA 4 rated switch. A Stainless Steel housing will cost more than a die cast Aluminum or Brass housing. A dual chamber design more than the standard housing.

The Eight Steps:
1. Does the applications require an Explosion Proof (NEMA 7) housing or a Watertight (NEMA 4) housing?
2. Do you need single or dual set points?
3. Do you need fixed or adjustable dead band?
4. Do you need an adjustable set point switch or a factory set only switch (this step is only for Pressure Switches)?
5. Select the appropriate switch model listed in the step 5 boxes in the pressure, differential pressure or temperature switch selection charts. This selection would be based on comparing the basic size and features of the switch models listed in the box based on your choices for the first 4 steps. Refer to the appropriate switch product matrix or catalog page for more information on the switch models.
6. Determine the operation range needed from the appropriate switch model range charts.
7. Select the appropriate micro switch based on your electrical requirements and deadband requirements.
8. Select the wetted materials and process connection based on your process media and piping.

At this point you should be able to build the appropriate switch part number by following the “How to order this switch” section on the appropriate catalog page. Additional switch options should also be added to the part number.
PRESSURE SWITCH SELECTION

1. Choose the ENCLOSURE TYPE:
   - Explosion Proof (NEMA 7) or Watertight (NEMA 4)

2. Select the SET POINTS:
   - Single or Dual

3. Choose the DEAD BAND:
   - Fixed or Adjustable
     - Factory Set Only or Field Adjustability

4. Select the SET POINT ADJUSTABILITY:
   - Factory Set Only or Field Adjustability

5. Select the appropriate switch model:
   - APS N7, APA N7 B7 FPS N7 PPS N7, PPA N7 NPA N7, PPD N7, LPD N4 GPD N4, LPA N4 GPA N4 NPA N4 NPI N4, APA N4 B4 LPS N4 GPA N4 NPI N4, LPS N4 GPS N4 H4, APS N4 APA N4

6. Determine the operation range needed from the appropriate switch model range charts.

7. Select the appropriate micro switch based on your electrical requirements and dead band requirements.

8. Select the wetted materials and process connection based on your process media and piping.

At this point you should be able to build the appropriate switch part number by following the “How to order this switch” section on the appropriate catalog page. Additional switch options should also be added to the part number.
<table>
<thead>
<tr>
<th>ENCLOSURE / PROCESS INPUT</th>
<th>CONTROL MOUNT</th>
<th>SWITC TYPE</th>
<th>WETTED MATERIAL</th>
<th>RANGES</th>
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<td>Pressure</td>
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<td>0-750p</td>
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<tr>
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- **General Purpose**
- **Narrow Deadband**
- **Hermetically Sealed**
- **Manual Reset**
- **Adjustable Deadband**
- **Two Independents Adjustments**
- **Relay**
- **DPDT**
- **Buna**
- **Viton**
- **Teflon**
- **Stainless Steel**
- **Monel**
- **Vacuum**
- **Compound**
- **Inches of Water**
- **Compound Inches of Water**

- **Ranges**
  - 0-100 psi
  - 0-500 psi
  - 0-1000 psi
  - 0-2000 psi
  - 0-3000 psi
  - 0-4000 psi
  - 0-5000 psi
  - 0-20,000 psi
  - -40 – 750°F

- **Enclosures**
  - Waterproof (Nema 4)
  - Explosion Proof (Nema 7)
  - Stainless Steel Body

- **Materials**
  - Buna
  - Viton
  - Teflon
  - Stainless Steel
  - Monel
  - Stainless Steel Body
DIFFERENTIAL PRESSURE SWITCH SELECTION

1. Select the appropriate micro switch based on your electrical requirements and dead band requirements.

2. Select the wetted materials and process connection based on your process media and piping.

3. At this point you should be able to build the appropriate switch part number by following the “How to order this switch” section on the appropriate catalog page. Additional switch options should also be added to the part number.

4. Determine the operation range needed from the appropriate switch model range chart.

5. Select the appropriate micro switch based on your electrical requirements and dead band requirements.

6. Select the wetted materials and process connection based on your process media and piping.

7. At this point you should be able to build the appropriate switch part number by following the “How to order this switch” section on the appropriate catalog page. Additional switch options should also be added to the part number.
### DIFFERENTIAL PRESSURE SWITCH PRODUCT MATRIX

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<thead>
<tr>
<th>ENCLOSURE / PROCESS INPUT</th>
<th>CONTROL FUNCTION</th>
<th>SWITCH TYPE</th>
<th>WETTED MATERIAL</th>
<th>PRESSURE RANGES</th>
<th>CONTROLLED</th>
<th>SETPOINT</th>
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### PRESSURE RANGES

- 40 – 750°F
- 0-60 psi
- 0-15 psi
- 15-30 psi
- 30-60 psi
- 60-150 psi
- 150-300 psi
- 300-600 psi
- 600-1500 psi

### SETPOINT

- Single Fixed Setpoint
- Single Adjustable Setpoint
- Two Independently Adjustable Setpoints
- Adjustable Deadband
- Fixed Deadband

### TEMPERATURE

- Minimum: -40°F
- Maximum: 750°F

### PRESSURE

- Compound: 0-400 psi
- Compound: 0-600 psi
- Compound: 1000 psi
- Compound: 2000 psi
- Compound: 3000 psi
- Compound: 4000 psi
- Compound: 5000 psi
- Compound: 10000 psi
- Compound: 20000 psi

### MATERIALS

- Stainless Steel
- Monel
- Teflon
- Delrin
- Polyurethane
TEMPERATURE SWITCH SELECTION

1. EXPLOSION PROOF (NEMA 7) → WATERTIGHT (NEMA 4)
   ENCLOSEMENT TYPE
   - Dual
   - Single

2. SET POINTS
   - Fixed
   - Adjustable

3. FIXED DEAD BAND
   - T7 PTS N7
   - PTA N7
   - LTD N4 GTD N4
   - LTA N4 GTA N4

4. FIXED DEAD BAND ONLY
   - T4 LTS N4 GTS N4

5. Determine the operation range needed from the appropriate switch model range charts.

6. Select the appropriate micro switch based on your electrical requirements and dead band requirements.

7. Select the wetted materials and process connection based on your process media and piping.

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