

Mechanical Pressure Switch

- Switch point adjustable by hand turn of housing barrel
- 10 Amps / 250 VAC
4 Amps / 30 VDC
- Temperatures ranges from -40°F to 248°F
- 1 million cycle durability
- Pressure settings from 10 to 750 psi
- IP65/IP67-rated enclosures ensure protection against dust and water ingress



About

The P412 is a compact, hand adjustable switch designed for applications requiring precise pressure monitoring and control. With selectable contact types (SPST-NO, SPST-NC, & SPDT) and a broad operating pressure range from 10 to 750 psi, it is adaptable across diverse process system requirements. Constructed from brass or stainless steel and with multiple thread & electrical connection options, it supports customization for specific installations. The P412's robust electrical endurance and mechanical lifespan make it ideal for demanding industrial environments.

Applications

- ✓ Industrial machinery
- ✓ Manufacturing equipment
- ✓ Automotive industry
- ✓ HVAC
- ✓ Refrigeration
- ✓ Water treatment
- ✓ Fluid management
- ✓ Heavy equipment
- ✓ Hydraulic compactors
- ✓ More

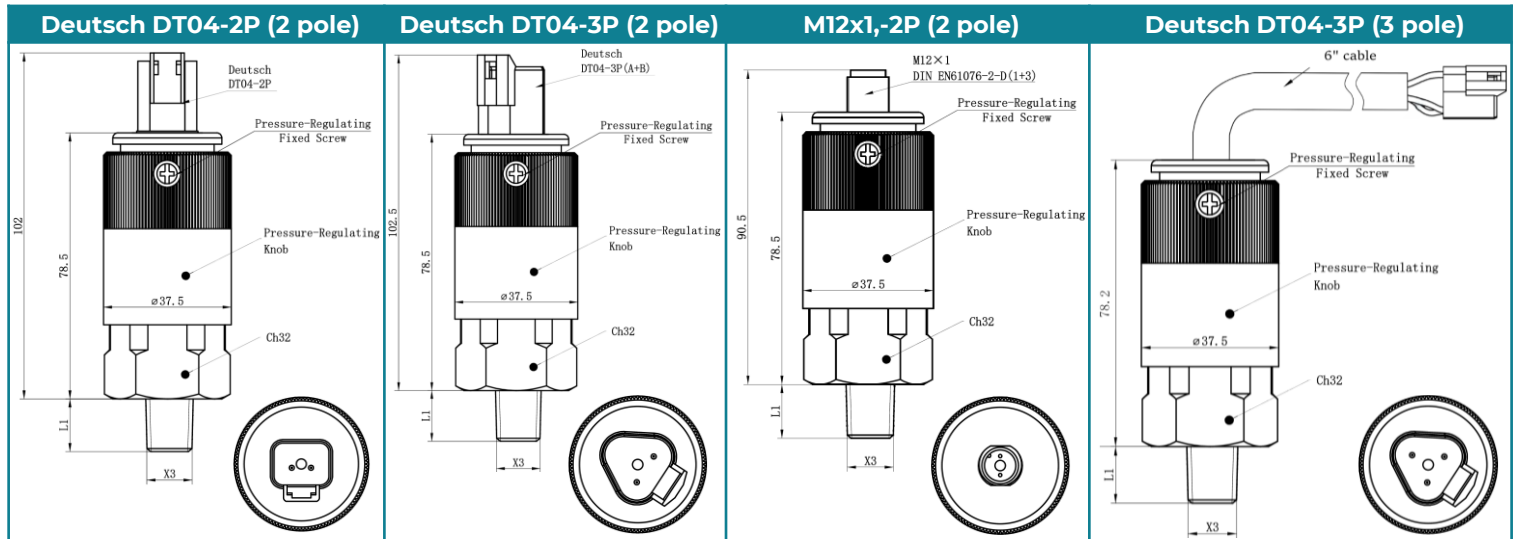
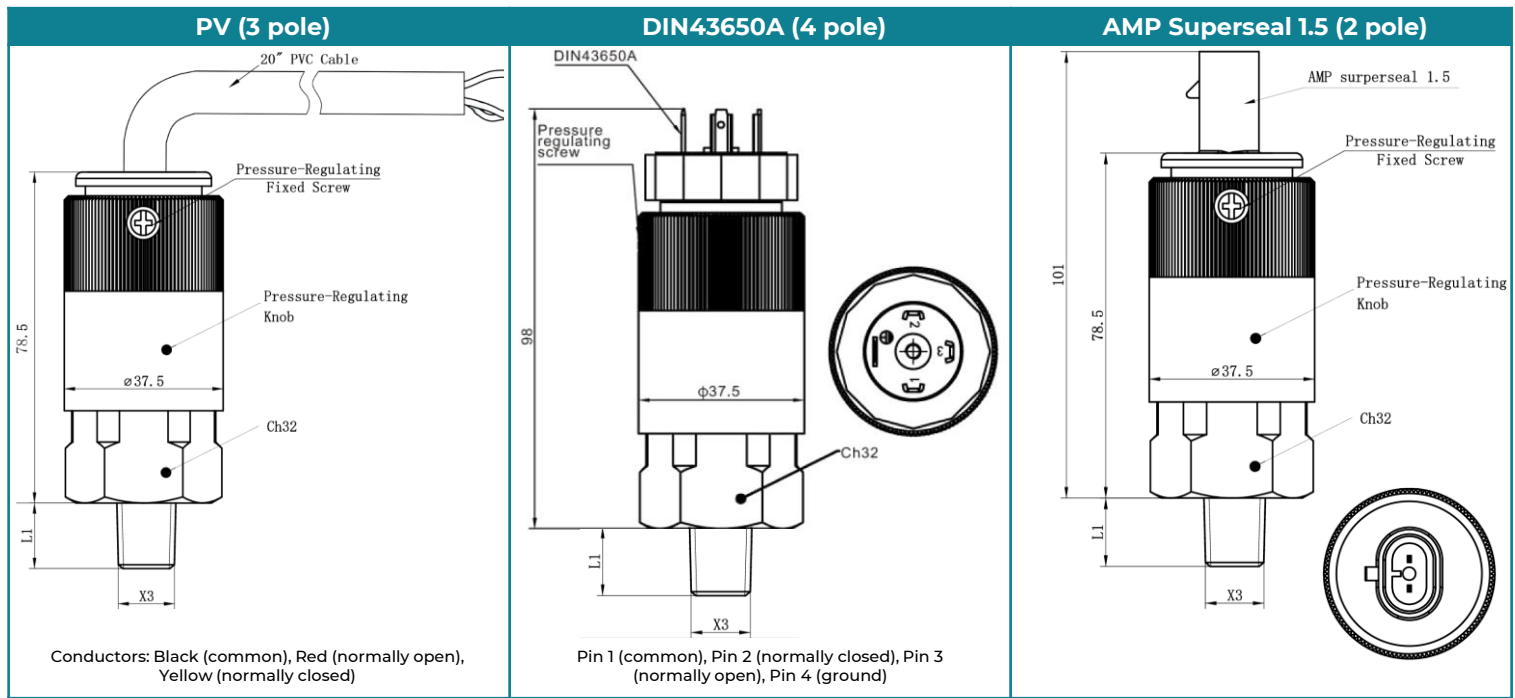
Build Your Part Number

Series P412

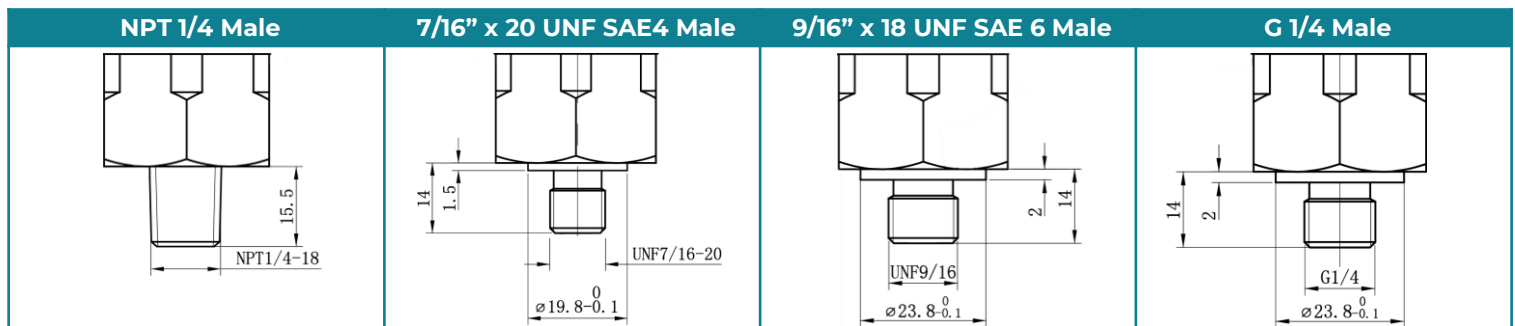
Example: P412DCBN15C6B300R-PSE120

| Series | | | | | | | | | | | | | | | | | | | |
|--|--|---------------|-----|-----|---|---------|-------------|---|----------|-------------|---|----------|-------------|---|-----------|-------------|---|-----------|---------------|
| P412 | | | | | | | | | | | | | | | | | | | |
| Pressure Range - select one | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>PSI</th> <th>Bar</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>10...40</td> <td>0.69...2.76</td> </tr> <tr> <td>B</td> <td>25...100</td> <td>1.73...6.90</td> </tr> <tr> <td>C</td> <td>50...200</td> <td>3.45...13.8</td> </tr> <tr> <td>D</td> <td>100...400</td> <td>6.9...27.59</td> </tr> <tr> <td>E</td> <td>250...750</td> <td>17.25...51.73</td> </tr> </tbody> </table> | | PSI | Bar | A | 10...40 | 0.69...2.76 | B | 25...100 | 1.73...6.90 | C | 50...200 | 3.45...13.8 | D | 100...400 | 6.9...27.59 | E | 250...750 | 17.25...51.73 |
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| Contact Type- select one | | | | | | | | | | | | | | | | | | | |
| A | SPST normally open (electrical terminal options 6B, PV, AS, 6D, 6E, 6F) | | | | | | | | | | | | | | | | | | |
| B | SPST normally closed (electrical terminal options 6B, PV, AS, 6D, 6E, 6F) | | | | | | | | | | | | | | | | | | |
| C | SPDT change-over (electrical terminal options 6B, PV, 6G) | | | | | | | | | | | | | | | | | | |
| Body Material & Wetted Pressure Port - select one | | | | | | | | | | | | | | | | | | | |
| S | Stainless Steel 304 | | | | | | | | | | | | | | | | | | |
| B | Brass | | | | | | | | | | | | | | | | | | |
| Sealing Material - select one (applies to internally wetted parts and parallel threaded process ports) | | | | | | | | | | | | | | | | | | | |
| N1 | NBR (-30...+100°C) standard | | | | | | | | | | | | | | | | | | |
| F1 | FKM (-10...+120°C) | | | | | | | | | | | | | | | | | | |
| H1 | HNBR (-30...+120°C) | | | | | | | | | | | | | | | | | | |
| E1 | EPDM (-50...+130°C) | | | | | | | | | | | | | | | | | | |
| Process Port - select one | | | | | | | | | | | | | | | | | | | |
| 5A | NPT 1/8" male (only for pressure ranges below 750 psi) | | | | | | | | | | | | | | | | | | |
| 5C | NPT 1/4" male | | | | | | | | | | | | | | | | | | |
| 5G | 7/16" x 20 UNF SAE4 male (ED ring seal included) | | | | | | | | | | | | | | | | | | |
| 5L | 9/16" x 18 UNF SAE 6 male (ED ring seal included) | | | | | | | | | | | | | | | | | | |
| 5N | G 1/4 Male (ED ring seal included) | | | | | | | | | | | | | | | | | | |
| Electrical Terminals - select one (see page 3) | | | | | | | | | | | | | | | | | | | |
| 6B | DIN 43650A (IP65) (SPDT, SPST normally open or normally closed; 4 pole) | | | | | | | | | | | | | | | | | | |
| PV | 20" PVC non-shielded cable (IP67) (SPDT, SPST normally open or normally closed; 3 conductor) | | | | | | | | | | | | | | | | | | |
| AS | AMP Superseal 1.5 series, 2-pole (IP 67) (SPST normally open or normally closed; 2 pole) | | | | | | | | | | | | | | | | | | |
| 6D | M12x1, 2-pole (IP67) (SPST normally open or normally closed; 2 pole) | | | | | | | | | | | | | | | | | | |
| 6E | Deutsch DT04-2P (IP67) (SPST normally open or normally closed; 2 pole) | | | | | | | | | | | | | | | | | | |
| 6F | Deutsch DT04-3P (IP67) (SPST normally open or normally closed; Note: DT04-3P form factor, but only 2 poles) | | | | | | | | | | | | | | | | | | |
| 6G | Deutsch DT04-3P attached by shrink wrapped 6" leads (IP67) (SPDT, SPST normally open or normally closed; 3 pole) | | | | | | | | | | | | | | | | | | |
| Factory Setting - optional (leave blank if not desired) | | | | | | | | | | | | | | | | | | | |
| XXX ex: 300 = switch point at 300 psi; 500 = switch point at 500 psi | | | | | | | | | | | | | | | | | | | |
| Activation - select only when a factory setting is selected, otherwise leave blank | | | | | | | | | | | | | | | | | | | |
| R | Set to switch on rising pressure | | | | | | | | | | | | | | | | | | |
| F | Set to switch on falling pressure | | | | | | | | | | | | | | | | | | |
| Mating Electrical Connection Assembly – optional; will be quoted as a separate line item (leave blank if not desired) | | | | | | | | | | | | | | | | | | | |
| PSE1 | M12x1, 5 pole - straight with cable gland (field wireable) | | | | | | | | | | | | | | | | | | |
| PSE102 | M12x1, 5 pole - straight with 1 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE103 | M12x1, 5 pole - straight with 3 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE150 | M12x1, 5 pole - straight with 1 meter PVC shielded cable | | | | | | | | | | | | | | | | | | |
| PSE151 | M12x1, 5 pole - straight with 3 meter PVC shielded cable | | | | | | | | | | | | | | | | | | |
| PSE6 | M12x1, 5 pole - 90° (field wireable) | | | | | | | | | | | | | | | | | | |
| PSE7 | M12x1, 5 pole - 90° with 1 meter PUR shielded cable | | | | | | | | | | | | | | | | | | |
| PSE8 | M12x1, 5 pole - 90° with 3 meter PUR shielded cable | | | | | | | | | | | | | | | | | | |
| PSE14 | DIN 43650-A with cable gland (field wireable) | | | | | | | | | | | | | | | | | | |
| PSE120 | DIN 43650-A with 1 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE121 | DIN 43650-A with 3 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE17 | DIN 43650-A with 1 meter PUR shielded cable | | | | | | | | | | | | | | | | | | |
| PSE18 | DIN 43650-A with 3 meter PUR shielded cable | | | | | | | | | | | | | | | | | | |
| PSE19 | DIN 43650-A with 1/2" NPT female (field wireable) | | | | | | | | | | | | | | | | | | |
| PSE132 | Deutsch DT04-2P with 1 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE133 | Deutsch DT04-2P with 3 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE138 | Deutsch DT04-3P with 1 meter PVC cable | | | | | | | | | | | | | | | | | | |
| PSE139 | Deutsch DT04-3P with 3 meter PVC cable | | | | | | | | | | | | | | | | | | |

Electrical Connections



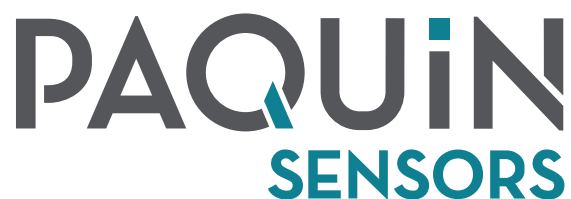
Process Ports



Technical Parameters

| Technical Parameters | | | |
|----------------------|---|---|---------------------------------|
| Accuracy | Switching Hysteresis (Differential) | For ranges 25...100, 50...200, 100...400, 250...750 psi: 10-20% of the set pressure (e.g. pressure setting 150 psi, hysteresis 15-30 psi) For range 10...40 psi: 10-40% of the set pressure (e.g. pressure setting 20 psi, hysteresis 2-8 psi) | |
| | Repeatability Precision | 1% | |
| | Pressure Sensing Technology | Diaphragm | |
| | Switch Point | Factory set with field (user) adjustability | |
| | Mechanical Life Endurance | 1 million cycles | |
| | Electric Life Endurance | 50,000 cycles | |
| Electrical | Max AC / Max DC | 250VAC / 10Amp | 30VDC / 4 Amp |
| | Output | SPST normally open SPST normally closed SPDT change-over | |
| | Insulation Resistance & Dielectric Strength | 10mΩ @ 1 min with 500VDC between all insulated inserts and plastic parts and maintain no alarm and breakdown phenomenon for one minute. | |
| | Electrical Connections | DIN 43650-A with field wireable mating connector PVC cable 20" non shielded DT04 - 2 pole DT04 - 3 pole (Note: 3 pole form factor, but only 2 poles) Amp Super seal (please refer to TE Connectivity part# 282104-1 M12x1, 2 pole | |
| Environmental | Over Pressure | 6,525 PSI (450 bar) | |
| | Burst Pressure | 8,700 PSI (600 bar) | |
| | Max Vibration | 10-60Hz, peak amplitude 0.15mm, acceleration 20m/s ² , vibration duration 2 hours | |
| | Operating Temperature | FKM | +14° ... 248°F (-10° ... 120°C) |
| | | NBR | -22° ... 212°F (-30° ... 100°C) |
| | | HNBR | -22° ... 248°F (-30° ... 120°C) |
| | | EPDM | -58° ... 266°F (-50° ... 130°C) |
| | Ambient Temperature Range | -13°F ... 150°F (-25°C ... 66°C) | |
| | Medium Temperature Range | -40°F ... 248°F (-40°C ... 120°C) | |
| | Working Ambient Humidity | 30% ... 80% Relative Humidity | |
| | IP Protection | DIN 43650A Hirschmann with approved mating connector | IP65 |
| | | All others | IP67 |
| Material | Body and Pressure Port | Stainless steel | |
| | | Brass | |
| | Electrical Contacts | Silver cadmium alloy | |
| | Wetted Internal Seals | Nitrile Rubber Buna (NBR), FKM, HNBR, EPDM | |
| | Weight | ~320g | |

Additional Information



Paquin Sensors' product portfolio is designed to provide options to fit the most diverse range of specifications.

We collaborate with our customers to match the best product technologies with your unique application requirements.

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