

# 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 - <i>select one</i>	
PSI	Bar
<b>A</b> 10...40	0.69...2.76
<b>B</b> 25...100	1.73...6.90
<b>C</b> 50...200	3.45...13.8
<b>D</b> 100...400	6.9...27.59
<b>E</b> 250...750	17.25...51.73

Contact Type- <i>select one</i>	
<b>A</b>	SPST normally open (electrical terminal options AS, 6D, 6E, 6F)
<b>B</b>	SPST normally closed (electrical terminal options AS, 6D, 6E, 6F)
<b>C</b>	SPDT change-over (electrical terminal options 6B, PV, PV4, 6H, 6G, WP)

Body Material & Wetted Pressure Port - <i>select one</i>	
<b>S</b>	Stainless Steel 304
<b>B</b>	Brass

Sealing Material - <i>select one (applies to internally wetted parts and parallel threaded process ports)</i>	
<b>N1</b>	NBR (-30...+100°C) standard
<b>F1</b>	FKM (-10...+120°C)
<b>H1</b>	HNBR (-30...+120°C)
<b>E1</b>	EPDM (-50...+130°C)

Process Port - <i>select one</i>	
<b>5A</b>	NPT 1/8" male (only for pressure ranges below 750 psi)
<b>5C</b>	NPT 1/4" male
<b>5G</b>	7/16" x 20 UNF SAE4 male (ED ring seal included)
<b>5L</b>	9/16" x 18 UNF SAE 6 male (ED ring seal included)
<b>5N</b>	G 1/4 Male (ED ring seal included)

Electrical Terminals - <i>select one (see page 4)</i>	
<b>6B</b>	DIN 43650A (IP65) (SPDT; 4 pole)
<b>PV</b>	20" inches PVC non-shielded cable (SPDT; 3 conductor)
<b>PV4</b>	12' feet PVC non-shielded cable (SPDT; 3 conductor)
<b>AS</b>	AMP Superseal 1.5 series, 2-pole (SPST normally open or normally closed; 2 pole)
<b>6D</b>	M12x1, 2-pole (SPST normally open or normally closed; 2 pole)
<b>6H</b>	M12x1, 5-pole attached by 6" leads (SPDT; 5 pole)
<b>6E</b>	Deutsch DT04-2P (SPST normally open or normally closed; 2 pole)
<b>6F</b>	Deutsch DT04-3P (SPST normally open or normally closed; Note: DT04-3P form factor, 2 active poles)
<b>6G</b>	Deutsch DT04-3P attached by 6" leads (SPDT; 3 pole)
<b>WP</b>	Weather Pack Connector attached by 6" leads (SPDT; 3 pole)

# Build Your Part Number

**Series P412**

**Example: P412DCBN15C6B300R-PSE120**

### 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

<b>R</b>	Set to switch on rising pressure
<b>F</b>	Set to switch on falling pressure

### Mating Electrical Connection Assembly – optional; will be quoted as a separate line item (leave blank if not desired)

Part#	
<b>PSE14</b>	DIN 43650-A female with cable gland, field wireable
<b>PSE19</b>	DIN 43650-A female 1/2" NPT threaded port, field wireable
<b>PSE73</b>	DIN 43650-A female with 1 meter PVC unshielded cable
<b>PSE74</b>	DIN 43650-A female with 3 meter PVC unshielded cable
<b>PSE75</b>	DIN 43650-A female with 5 meter PVC unshielded cable
<b>PSE76</b>	DIN 43650-A female with 7.5 meter PVC unshielded cable
<b>PSE77</b>	DIN 43650-A female with 10 meter PVC unshielded cable
<b>PSE78</b>	DIN 43650-A female with 20 meter PVC unshielded cable
<b>PSE1</b>	M12x1, 5-pole female straight with cable gland, field wireable
<b>PSE150</b>	M12x1, 5-pole female straight with 1 meter PVC shielded cable
<b>PSE151</b>	M12x1, 5-pole female straight with 3 meter PVC shielded cable
<b>PSE152</b>	M12x1, 5-pole female straight with 5 meter PVC shielded cable
<b>PSE153</b>	M12x1, 5-pole female straight with 7.5 meter PVC shielded cable
<b>PSE154</b>	M12x1, 5-pole female straight with 10 meter PVC shielded cable
<b>PSE155</b>	M12x1, 5-pole female straight with 20 meter PVC shielded cable
<b>PSE30</b>	M12x1, 5-pole female 90° with 1 meter PVC shielded cable
<b>PSE31</b>	M12x1, 5-pole female 90° with 3 meter PVC shielded cable
<b>PSE32</b>	M12x1, 5-pole female 90° with 5 meter PVC shielded cable
<b>PSE33</b>	M12x1, 5-pole female 90° with 7.5 meter PVC shielded cable
<b>PSE34</b>	M12x1, 5-pole female 90° with 10 meter PVC shielded cable
<b>PSE35</b>	M12x1, 5-pole female 90° with 20 meter PVC shielded cable
<b>PSE121</b>	Deutsch DT06-2P female with 1 meter PVC unshielded cable
<b>PSE122</b>	Deutsch DT06-2P female with 3 meter PVC unshielded cable
<b>PSE123</b>	Deutsch DT06-2P female with 5 meter PVC unshielded cable
<b>PSE124</b>	Deutsch DT06-2P female with 7.5 meter PVC unshielded cable
<b>PSE125</b>	Deutsch DT06-2P female with 10 meter PVC unshielded cable
<b>PSE126</b>	Deutsch DT06-2P female with 20 meter PVC unshielded cable
<b>PSE127</b>	Deutsch DT06-3P female with 1 meter PVC unshielded cable
<b>PSE128</b>	Deutsch DT06-3P female with 3 meter PVC unshielded cable
<b>PSE129</b>	Deutsch DT06-3P female with 5 meter PVC unshielded cable
<b>PSE130</b>	Deutsch DT06-3P female with 7.5 meter PVC unshielded cable
<b>PSE131</b>	Deutsch DT06-3P female with 10 meter PVC unshielded cable
<b>PSE132</b>	Deutsch DT06-3P female with 20 meter PVC unshielded cable

# Electrical Connections

<p><b>PV (3 pole)</b></p> <p>20" PVC Cable</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>Conductors: Black (common), Red (normally open), Yellow (normally closed)</p>	<p><b>DIN43650A (4 pole)</b></p> <p>DIN43650A</p> <p>Pressure regulating screw</p> <p>Ch32</p> <p>98</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>Pin 1 (common), Pin 2 (normally closed), Pin 3 (normally open), Pin 4 (ground)</p>	<p><b>AMP Superseal 1.5 (2 pole)</b></p> <p>AMP surperseal 1.5</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>101</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p>
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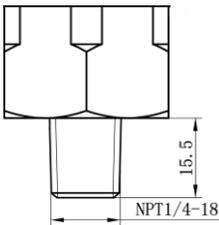
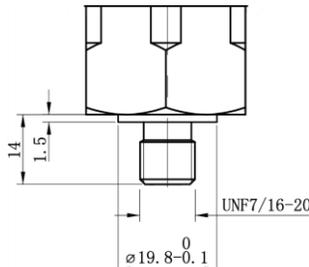
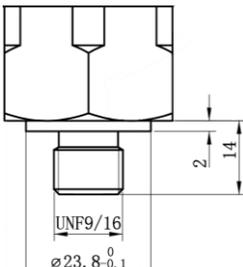
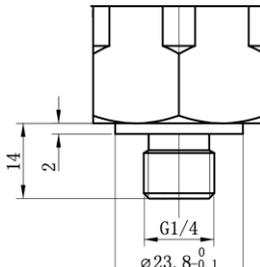
<p><b>Deutsch DT04-2P (2 pole)</b></p> <p>Deutsch DT04-2P</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>102</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p>	<p><b>Deutsch DT04-3P (2 pole)</b></p> <p>Deutsch DT04-3P (A+B)</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>102.5</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p>	<p><b>M12x1,-2P (2 pole)</b></p> <p>M12x1 DIN EN61076-2-D(1+3)</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>90.5</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p>	<p><b>Deutsch DT04-3P (3 pole)</b></p> <p>6" cable</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>78.2</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>Pin 1 (normally open), Pin 2 (normally closed), Pin 3 (common)</p>
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<p><b>PV4 (3 pole)</b></p> <p>12" PVC non-shielded cable</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>78.5</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>Conductors: Black (common), Red (normally open), Yellow (normally closed)</p>	<p><b>Weather Pack</b></p> <p>6" cable</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>78.2</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>C (Common), B (normally closed), A (normally open)</p>	<p><b>M12x1, 5-pole with 6 inch leads</b></p> <p>6" cable</p> <p>Pressure-Regulating Fixed Screw</p> <p>Pressure-Regulating Knob</p> <p>Ch32</p> <p>78.2</p> <p>37.5</p> <p>L1</p> <p>X3</p> <p>Pin 1 (normally closed), Pin 3 (common), Pin 4 (normally open), Pin 2 &amp; 5 (not used)</p>
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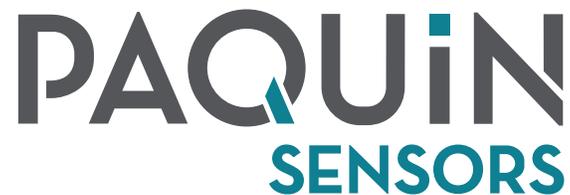
# Technical Parameters

Technical Parameters				
<b>Accuracy</b>	Switching Hysteresis (Differential)	10-20% of the set pressure (e.g. pressure setting 600psi, hysteresis 60-120psi)		
	Repeatability Precision	1%		
	Pressure Sensing Technology	Piston		
	Switch Point	Factory set with field (user) adjustability		
	Mechanical Life Endurance	1 million cycles		
	Electric Life Endurance	50,000 cycles		
<b>Electrical</b>	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		
<b>Environmental</b>	Over Pressure	11600 PSI (800 bar)		
	Burst Pressure	14500 PSI (10000 bar)		
	Max Vibration	10-60Hz, peak amplitude 0.15mm, acceleration 20m/s <sup>2</sup> , 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	-22°F ... 212°F (-30°C ... 100°C)		
	Working Ambient Humidity	30% ... 80% Relative Humidity		
IP Protection	DIN 43650A Hirschmann with approved mating connector	IP65		
	All others	IP67		
<b>Material</b>	Body and Pressure Port	Stainless steel		
		Brass		
	Electrical Contacts	Silver cadmium alloy		
	Wetted Internal Seals	Nitrile Rubber Buna (NBR), FKM, HNBR, EPDM		
Weight	~320g			

## Process Ports

NPT 1/4 Male	7/16" x 20 UNF SAE4 Male	9/16" x 18 UNF SAE 6 Male	G 1/4 Male
 <p>15.5 NPT1/4-18</p>	 <p>14 1.5 UNF7/16-20 ø 19.8<sup>0</sup><sub>-0.1</sub></p>	 <p>2 14 UNF9/16 ø 23.8<sup>0</sup><sub>-0.1</sub></p>	 <p>14 2 G1/4 ø 23.8<sup>0</sup><sub>-0.1</sub></p>

# 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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