

# Installation Instructions for the Honeywell Pressure Switch High Pressure Premium HPS Series (150 psi to 4500 psi)

## MECHANICAL REQUIREMENTS

### Installation Requirement

The HPS Series should be capable of being mounted in any orientation via a threaded port. A 27 mm hexagonal wrench should be used to install the pressure switch. Installation torque should be based on the information in Table 1 below. Installation of the pressure switch shall permit usage of maximum 27 mm hex box spanner, modified socket wrench, and open-ended wrench.

**Table 1. Installation Torque**

Thread	Torque (Nm)	Standard
M14 x 1.5	35	SAE J2244-3
1/2-20 UNF	25	SAE J1926-3
9/16-18 UNF	30	SAE J1926-3
3/4-16 UNF	50	SAE J1926-3

The pressure switch can withstand a side load (acting perpendicular to the mounted axis) of 100 Newton at the end of the integral connector in its mounted orientation. This load requirement is for any incidental physical abuse during installation or intended use.

## OVERPRESSURE

### CAUTION

#### PRODUCT DAMAGE

- Do not exceed the operating pressure.
- Failure to comply with these instructions could result in death or serious injury.**

If the operating pressure is exceeded, the life of the HPS Series may be reduced and electrical failure may occur. Both static and dynamic over-pressuring must be considered, particularly in hydraulic system applications. Hydraulic pressure fluctuations can have very high and rapid pressure spikes, as in a water hammer effect. The HPS Series has a snubber feature built-in to reduce the peak pressure applied to the pressure switch.

If system pressure pulses are expected, choose a pressure switch with a proof pressure rating high enough to allow operation at the highest expected pressure spikes.

## MEDIA COMPATIBILITY

### CAUTION

#### PRODUCT DAMAGE

- Use non-abrasive, chemically compatible media to prevent damage to the HPS Series.
- Failure to comply with these instructions could result in death or serious injury.**

The HPS Series' fluid path is an assembly of zinc plated steel and stainless steel.

## INSTALLATION

### CAUTION

#### PRODUCT DAMAGE

- Use a hex wrench for installation. DO NOT exceed a torque level based on the information in Table 1. Never apply torque to the connector housing or the body of the pressure switch.
- Do not subject the pressure switch to high temperatures from soldering, brazing, or welding of the system plumbing or operating environments above the specified maximum temperature.

**Failure to comply with these instructions could result in death or serious injury.**

Ensure the power supply is off while wiring.

## WIRING INSTRUCTIONS

### NOTICE

To ensure proper environmental sealing and electrical connections when using a connector, follow the connector manufacturer's installation guidelines. All terminal cavities must be sealed using the correct wire gauge and seal combination. If only two leads are used, any additional terminal cavities should be sealed per the connector manufacturer's installation guide. Honeywell recommends using a crimping tool for crimping wires to the connector terminals. Contact the individual connector manufacturer for connector wiring.

## FUNCTIONAL TEST

Connect the pressure switch to the pressure source (off). Based on the pressure switch's specified normally open (NO) or normally closed (NC) output, connect the electrical termination to a dc voltage supply. With no pressure on the pressure switch, turn on the power supply and ensure that the pressure switch is in the correct NO or NC position. Apply the appropriate set point pressure to ensure that the NO or NC contact position of the switch will switch over.

# Honeywell Pressure Switch

## High Pressure Premium HPS Series

(150 psi to 4500 psi)

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### PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Output types	NO, NC, SPDT (NO/NC)
Contacts	Gold-plated
Contact ratings	5 mA to 5 A
Sealing	IP67
System operating pressure (max.)	5000 psi [345 bar]
Proof pressure	10000 psi [689 bar]
Burst pressure	20000 psi [1379 bar]
Set point (factory set)	150 psi to 4500 psi [10.34 bar to 310.26 bar]
Set point accuracy	up to $\pm 2$ %
Pressure ports	M14 x 1.5, 9/16-18 UNF, 3/4-16 UNF, 1/2-20 UNF
Termination	<ul style="list-style-type: none"> <li>• Spade terminals</li> <li>• Screw terminals</li> <li>• Cable</li> <li>• Deutsch DT04-3P</li> <li>• AMP Superseal 1.5</li> <li>• Cable with Deutsch DT04-3P</li> <li>• Cable with Deutsch DT04-2P</li> <li>• Cable with AMP Superseal 1.5</li> <li>• Cable with Packard Metripak 150</li> <li>• Cable with DIN 4365D-C</li> <li>• Cable with M12 x 1</li> <li>• 150 mm cable with Packard weatherpack male terminal</li> </ul>
Spike damping	Achieved via a snubber mechanism
Diameter	27 mm [1.06 in]
Length without mating connector	80,21 mm [3.16 in]
Operating temperature range	-40 °C to 120 °C [-40 °F to 248 °F]
Vibration - swept sine	10 Hz to 2000 Hz @ 15 g, 20 min/sweep
Weight	~4.7 oz [~133 g]
Dimensions	See dimensional diagram on page 3 for specific configuration dimensions

# Honeywell Pressure Switch

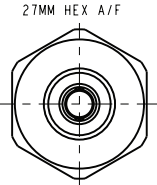
## High Pressure Premium HPS Series

(150 psi to 4500 psi)

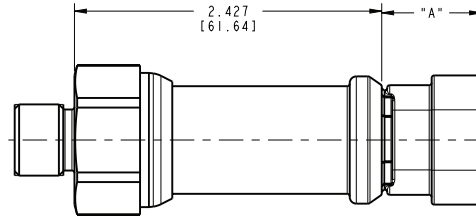
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### DIMENSIONS

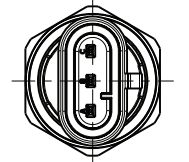
Connector Type	Female Connector Part Number (Included)	Male Mating Connector (customer provided)	Dimension "A" (max.)	IP Rating
Amp Superseal 1.5	C-282105	C-282087	20,02 mm [0.788 in]	IP67
Deutsch	DT04-3P	DT06-3S	21,16 mm [0.833 in]	IP67
Spade terminal	-	-	14,43 mm [0.568 in]	-
Screw terminal	-	-	12,65 mm [0.498 in]	-
Cable	-	-	19,51 mm [0.768 in]	IP67



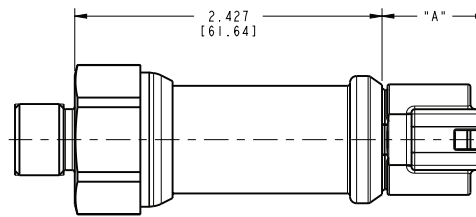
All variants (top view)



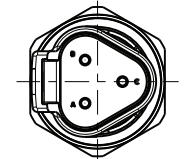
AMP Superseal 1.5



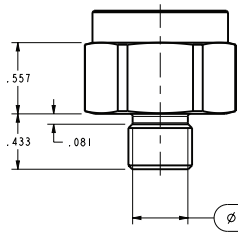
AMP Superseal 1.5 (bottom view)



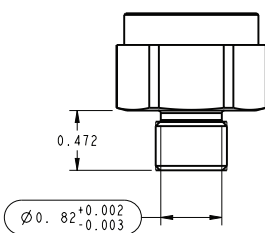
Deutsch



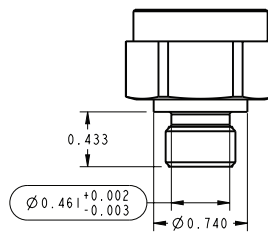
Deutsch (bottom view)



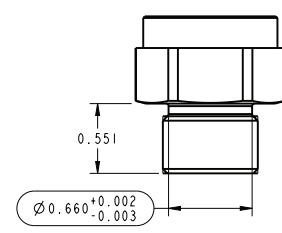
Port: 1/2-20 UNF



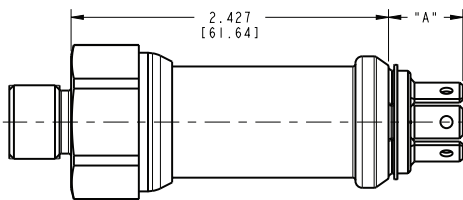
Port: 9/16-18 UNF



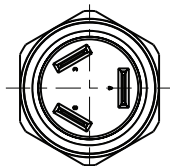
Port: M14 x 1.5



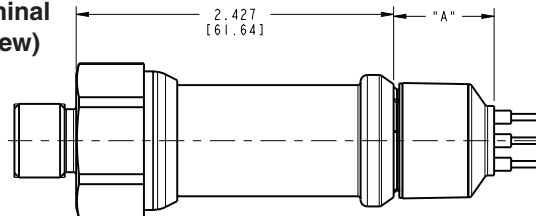
Port: 3/4-16 UNF



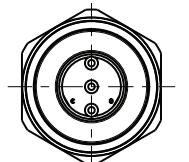
Spade Terminal



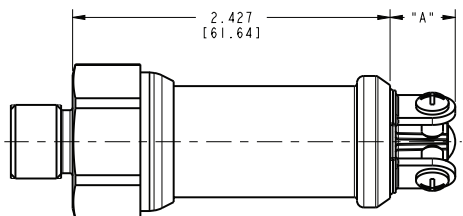
Spade Terminal (bottom view)



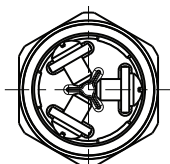
Cable



Cable (bottom view)



Screw Terminal



Screw Terminal (bottom view)

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### WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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### **PERSONAL INJURY WARNING**

**DO NOT USE** these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARNING**

Honeywell does not recommend using devices for critical control applications where there is, or may be, a single point of failure or where single points of failure may result in an unsafe condition. It is up to the end-user to weigh the risks and benefits to determine if the products are appropriate for the application based on security, safety and performance. Additionally, it is up to the end-user to ensure that the control strategy results in a safe operating condition if any crucial segment of the control solution fails. Honeywell customers assume full responsibility for learning and meeting the required Declaration of Conformity, Regulations, Guidelines, etc. for each country in their distribution market.

Sensing and Control

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