



Precision Sensors Division

## Differential Pressure Switches

### For High Purity Applications

Precision Sensors' High Purity Differential Pressure Switches complement their line of Vacuum, Gauge, and Absolute Pressure Switches designed and manufactured specifically for clean processes requiring reliability and longevity.

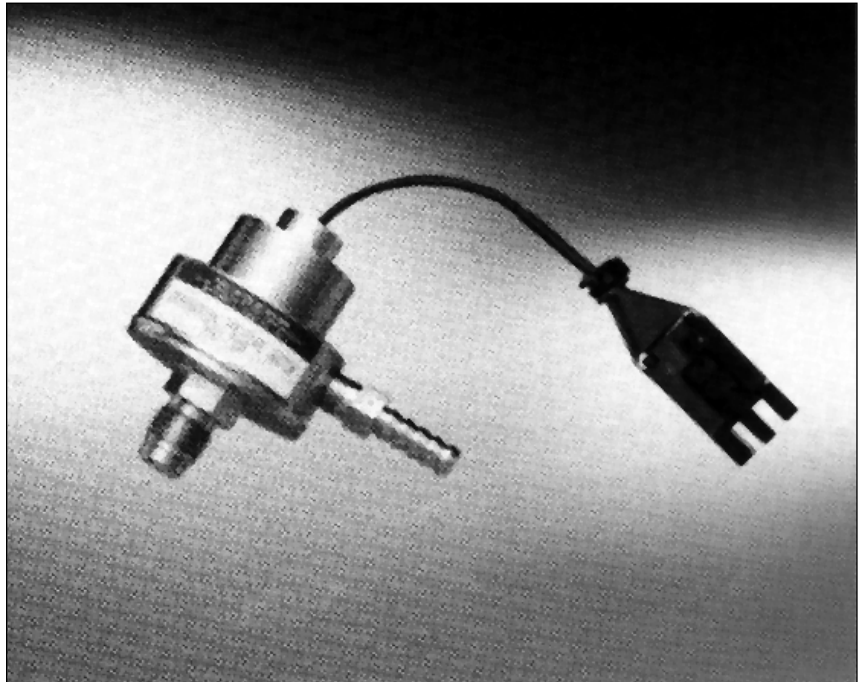
**Factory set to your specification**

**Port 1 has electropolished 316L stainless steel wetted surfaces**

**Electron beam welded construction**

**100% Helium leak tested**

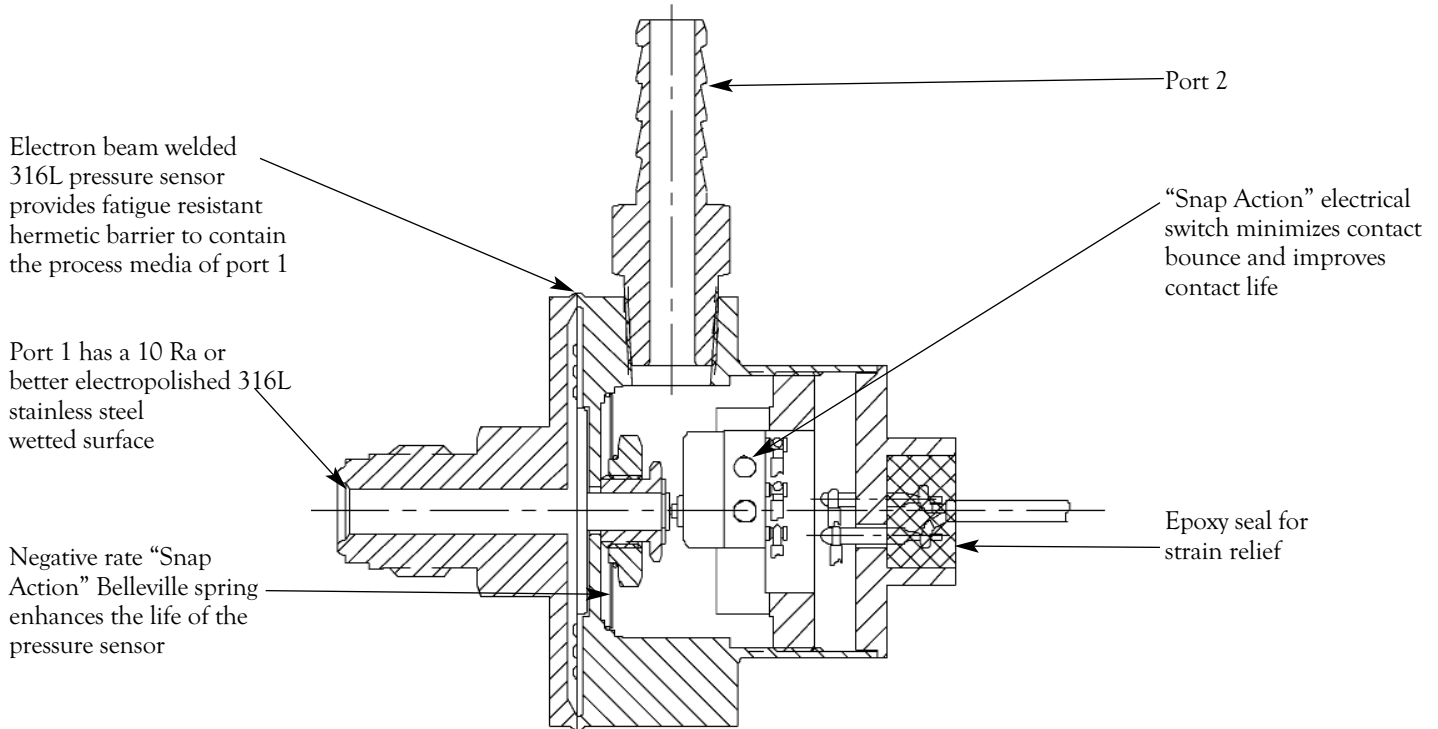
**Highly repeatable  
"Snap Action" Belleville  
spring design**



These switches feature 2 ports: port 1 is suitable for high purity gases and other media compatible with 316L stainless steel; port 2 is suitable for dry air or inert gases. Common applications include load-lock chambers, gas delivery systems and mini environments.

All products comply with European safety requirements, bear the CE part mark and are UL recognized under file number E 179859.

## Features



## Performance

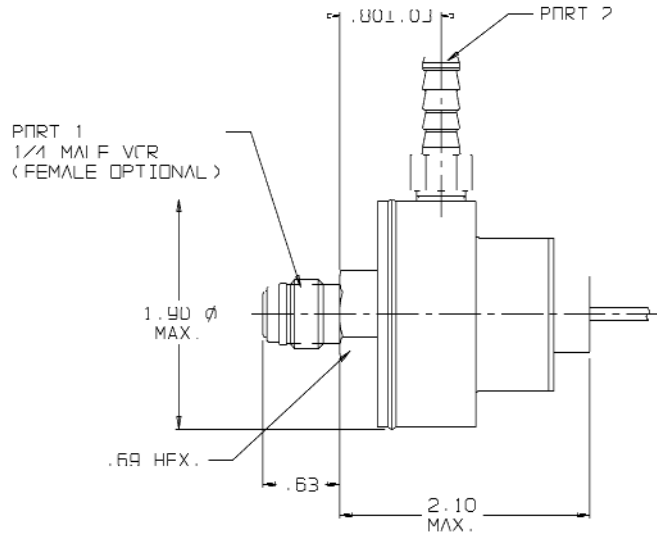
Available Settings	Hysteresis (Deadband)	Repeatability	Proof Pressure Differential	Proof Pressure Both Ports Simultaneously
20 to 250 mm Hg differential	20 mm HG + 5% of setting	±5 mm + 2% of setting	100 PSID	300 PSIG

## Specifications

<b>Calibration</b>	All units are factory set to customer specifications
<b>Construction</b>	Electron beam welded diaphragm; negative rate “Snap Action” Belleville load spring
<b>Media</b>	Port 1: any liquid or gas compatible with 316L stainless steel Port 2: dry air or inert gas
<b>Leakage</b>	100% helium leak tested to $1 \times 10^{-9}$ std cc/sec (Port 1)
<b>Surface Finish</b>	Port 1: 10 Ra or better
<b>Temperature</b>	Operating: 0 to 130°F Non-operating: -40 to 180°F Higher temperature constructions are available
<b>Electrical</b>	All units utilize a UL recognized and CSA listed electrical switch. Gold contacts: 1 amp resistive, 0.5 amp inductive at 28 VDC Silver contacts: 5 amp resistive., 3 amp inductive at 28 VDC, 5 amp resistive at 250 VAC; mechanical contact life up to 10 million cycles
<b>Enclosure</b>	The mechanism, electrical switch and wiring are exposed to the media of Port 2
<b>Installation</b>	Insensitive to mounting attitude



## Dimensions



## D48W

### Recommended Practices

United Electric Controls recommends careful consideration of the following factors when specifying and installing UE pressure units. Before installing a unit, the Installation and Maintenance instructions provided with unit must be read and understood.

To avoid damaging unit, proof pressure limits stated in literature and on nameplates must never be exceeded, even by surges in the system. Operation of the unit up to proof pressure is acceptable on a limited basis (i.e.start-up, testing) but continuous operation must be restricted to the designated range. Excessive cycling at proof pressure limits could reduce sensor life.

A back-up unit is necessary for applications where damage to a primary unit could endanger life, limb or property. A high or low limit switch is necessary for applications where dangerous runaway condition could result.

The range must be selected so that incorrect, inadvertent or malicious setting at any range point can not result in an unsafe system condition.

Install unit where shock, vibration and ambient temperature fluctuations will not damage unit or affect operation. Orient unit so that moisture does not enter the enclosure via the electrical connection.

Unit must not be altered or modified after shipment. Consult UE if

modification is necessary.

Monitor operation to observe warning signs of possible damage to unit, such as drift in set point. Check unit immediately.

Preventative maintenance and periodic testing is necessary for critical applications where damage to unit could endanger property or personnel.

For all applications, a factory set unit should be tested before use.

Electrical ratings stated in literature and on nameplate must not be exceeded. Overload on a switch can cause damage, possible on the first cycle. Wire unit according to local and national electrical codes, using wire size recommended in installation sheet.

Use only factory authorized replacement parts and procedures.

Do not mount unit in ambient temperature exceeding published limits

### Limited Warranty

UE warrants that the product thereby purchased is, upon delivery, free from defects in material and workmanship and that any such product which is found to be defective in such workmanship or material will be repaired or replaced by UE (F.O.B. UE); provided, however, that this warranty applies only to equipment found to be so defective within a period of 12 months after installation by buyer but

not to exceed 18 months after delivery by the seller. Except for the limited warranty of repair and replacement stated above, UE disclaims all warranties whatsoever with respect to the product, including all implied warranties of merchantability or fitness for any particular purpose.

### Liability Limitation

The sole and exclusive remedy of buyer for any liability or seller for any claim, including incurred in connection with (I) breach of any warranty whatsoever expressed or implied, (II) a breach of contract, (III) a negligent act or acts (or negligent failure to act) committed by seller, or (IV) an act for which strict liability will be imputed to seller, is limited to the limited warranty or repair and replacement stated herein. In no event shall the seller be liable for any special, indirect, consequential or other damages or like general nature, including, without limitation, loss of profits or production, or loss or expenses of any nature, incurred by the buyer or any third party.



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