



# SELECTION GUIDE

## SELECTION GUIDE

### Pressure, Flow, Level & Temperature Products for Ultra-Clean Processing



**P R E C I S I O N  
S E N S O R S**

# Stainless Steel Pressure Switches for High Purity

## PRECISION SENSORS

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www.precisionensors.com



MODEL NUMBER	PV48W	PV36W	P48W	P36W	P17W
Media	Gas or Liquid	Gas or Liquid	Gas or Liquid	Gas or Liquid	Gas or Liquid
Type	Factory set	Factory set	Factory set	Factory set	Factory set
Available Settings	10 to 150 mm Hg VAC	125 to 750 mm Hg VAC	0.5 to 5 psig	2.5 to 30 psig	20 to 100 psig
Deadband	20 mm Hg +5% of setting	40 mm Hg +6% of setting	0.5 psi +5% of setting	1.0 psi +6% of setting	4.0 psi +7% of setting
Repeatability	± 5 mm Hg +2% of setting	± 15 mm Hg +2% of setting	± 0.1 psi +2% of setting	± 0.3 psi +2% of setting	± 1.5 psi +4% of setting
Proof Pressure	0 psia - 150 psig	0 psia - 150 psig	0 psia - 150 psig	0 psia - 150 psig	0 psia - 300 psig
Burst Pressure	1200 psig min	3000 psig min	1200 psig min	3000 psig min	7500 psig min
**Design Pressure	1 MPa	1 MPa	1 MPa	1 MPa	1 MPa
Operating Temp. Range	0° to 130°F	0° to 130°F	0° to 130°F	0° to 130°F	0° to 130°F
Finish	10 or 5 Ra	10 or 5 Ra	0° to 130°F	10 or 5 Ra	0° to 130°F
Wetted Materials	316L VIM/VAR	10 or 5 Ra	316L VIM/VAR	316L VIM/VAR	316L VIM/VAR
Media Connections	1/4" end seal type NW25	1/4" end seal type 1.125" "C" seal	1/4" end seal type	1/4" end seal type 1.125" "C" seal	1/4" end seal type
Electrical Connections	Free leads Crimp type, D Sub	Free leads Crimp type	Free leads Crimp type	Free leads Crimp type	Free leads Crimp type
Min. Operating Life	1 million cycles	1 million cycles	1 million cycles	1 million cycles	500,000 cycles
Approvals	UL, CE	UL, CE	UL, CE	UL, CE	UL, CE
Warranty	3 Years	3 Years	3 Years	3 Years	3 Years
Dimensions					

Typical configurations  
shown with the  
identified end fitting

\*With 1/4 male end seal type




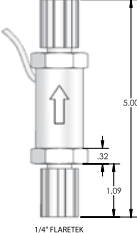
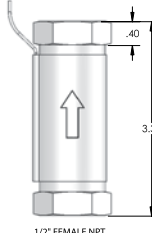
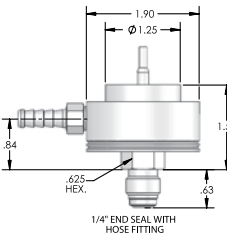
\*\*Unit will contain this, but may operate out of limits after exposure

P R E C I S I O N   S E N S O R S

					
E48W	E36W	E17W	P15M	P15M-A	TS12T
Gas or Liquid	Gas or Liquid	Gas or Liquid	Gas or Liquid	Liquid	Liquid
Factory set	Factory set	Factory set	Factory set	Adjustable	—
10 to 150 Torr	100 to 1500 Torr	1000 to 5000 Torr	5 to 75 psig	5-35 psig 20-50 psig 35-75 psig	—
20 Torr +5% of setting	40 Torr +6% of setting	200 Torr +7% of setting	2 psi +7% of setting	3 psig + 9% of set pt. 3 psig + 10% of set pt. 3 psig + 12% of set pt.	—
± 5 Torr +2% of setting	± 5 Torr +2% of setting	± 0.1 psi +2% of setting	± 0.5 psi +2% of setting	± 0.5 psig + 2% of set pt. ± 0.75 psig + 2% of set pt. ± 1.0 psig + 2% of set pt.	± 2 °C
0 psia - 150 psig	0 psia - 150 psig	0 psia - 300 psig	100 psig	100 psig	150 psig
1200 psig min	3000 psig min	7500 psig min	200 psig min	200 psig min	1500 psig min
1 MPa	1 MPa	1 MPa	1 MPa	1 MPa	1 MPa
0° to 130 °F	0° to 130 °F	0° to 130 °F	40° to 120 °F	40° to 120 °F	0° to 100 °F
10 or 5 Ra	10 or 5 Ra	0° to 130 °F	—	—	—
316L VIM/VAR	10 or 5 Ra	316L VIM/VAR	PFA or PTFE and PFA	PFA or PTFE and PFA	300 SST, PFA and PTFE
1/4" end seal type NW25	1/4" end seal type 1.125" "C" seal	1/4" end seal type 1.125" "C" seal	1/4" Flare type 1/4" Flare flow thru 1/4" MNPT Super 300® Type	1/4" Flare type 1/4" Flare flow thru 1/4" MNPT Super 300® Type	Consult Factory
Free leads Crimp type, D Sub	Free leads Crimp type, D Sub	Free leads Crimp type	Free leads Crimp type	Free leads Crimp type	Free leads Crimp type
1 million cycles	1 million cycles	1 million cycles	1 million cycles	1 million cycles	—
UL, CE	UL, CE	UL, CE	—	—	—
3 Years	3 Years	3 Years	1.5 Years	1.5 Years	1.5 Years
					

## Flow Switches

## Differential

		
V8F	V12F	D48W
Gas or Liquid	Liquid	Air or Inert Gas
Factory set	Factory set	Factory set
.035 to 2 SCFM .02 to 1.25 GPM	.15 to 5.0 GPM	20 to 250 mmHg differential
10% of setting	.15 to .5 GPM	20 mmHg + 5% of setting
5% of setting	.05 to .15 GPM	±5mm + 2% of setting
150 psig	150 psig min	100 psid 300 psig
200 psig min	1500 psig min	—
1 MPa	1 MPa	1 MPa
40° to 125° F	0° to 130° F	0° to 200° F
Material Dependent	Material Dependent	Port 1: 10 Ra or better
SS, PVDF, PTFE, PFA	SS, PVC, PFA	316L VIM/VAR
1/4", 3/8", 1/2", 3/4" and 1" flow thru Flare type End seal types Compression fittings	3/8", 1/2" NPT Compression	Port 1: 1/4" end seal type Port 2: 1/4" barb fitting 1/4" end seal type
Free leads Crimp type	Free leads Crimp type	Free leads Crimp type
—	—	500,000 cycles
UL, CE	UL, CE	UL, CE
1.5 Years	1.5 Years	3 Years
		



## Manufacturing Technologies:

### Stainless Steel Pressure Switches

- High set point repeatability
- Unaffected by exposure to high vacuum
- Welded for "Leak-tight" integrity
- Insensitive to mounting attitude
- Higher proof pressures option
- Higher temperature constructions are available
- Gold and silver switch contacts
- "Snap Action" Belleville spring design for superior accuracy, repeatability and switch life

### Flow Switches

- Rugged sealed switch construction
- By-pass chamber to minimize pressure drop



Weld is verified utilizing helium leak testing.

Precision Sensors' products are welded for unmatched performance and product consistency.

Proof of performance materials available upon request.

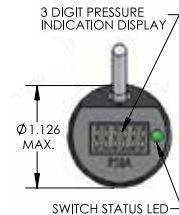
## Multi-Function Products

**Switch,  
Transducer  
& Display in  
Absolute Gauge  
Sealed Gauge  
Low Differential**

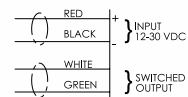


MODEL NUMBER	Staset®	ECHOLINE
Media	Compatible with 316L CRES	Clean Air Dry
Type	Factory set	Adjustable
Range	0 to 100 psig 0 to 300 psig 0 to 1 * 5 psia 0 to 30 psia 0 to 100 psia 0 to 300 psia	Full scale from 0.2 to 20" WC from 0 to 2000 Pa
Proof Pressure	2x range	$\pm 14.5 \geq 1"$ WC $\pm 80 < 1"$ WC
Burst Pressure	0 thru 300 psig: 5X Range 0 thru 300 psia: 2500 psia	20 psig
Design Pressure	1 MPa	—
Deadband	1% to 98% F.S.	1%
Switching Response	30 ms max.	1 Sec. to 30 Sec.
Switching Output	0.25A AC/DC 0.4A peak, 50V	1A @ 30 VDC
Switch Point Accuracy	$\pm 0.4\%$ F.S. rms @ 22 +/- 5 °C	$\pm 1\%$ F.S.
Switch Repeatability	$\pm 0.25\%$ F.S.	$\pm 0.5\%$ F.S.
Input Power	9 to 30 VDC	12 to 24 VDC
Analog Outputs	0-5 VDC, 4-20 mA	4-20 mA or 0-10 VDC
Status LED	Green/Red	In Range
Internal Volume	0.5cc for 1/4" end seal type	—
Operating Temp. Range	0° to 50 °C	0° to 40 °C
Display Accuracy	1% F.S., 0° to 50 °C	1% F.S., 0° to 40 °C
Wetted Materials	316L VIM/VAR	—
Min. Operating Life	5 million cycles	5 million cycles
Approvals	UL, CE	UL 991, CE
Warranty	5 Years	3 Years
Media Connections	1/4" end seal type 1/4" flow thru male & female 1.125" "C" seal	1/4" tubing (push to seal) Barbed hose fitting

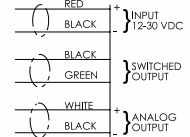
## Staset® (3 in 1 Pressure Switch)



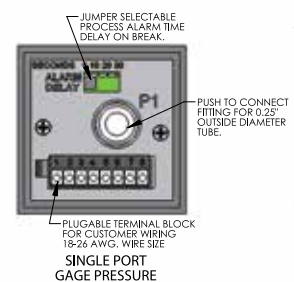
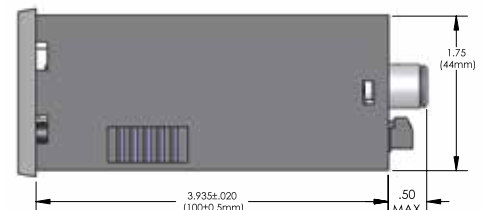
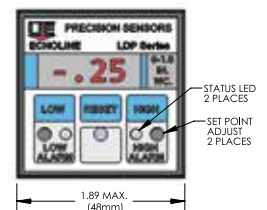
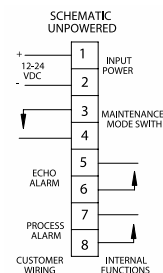
SCHEMATIC



SCHEMATIC



## ECHOLINE (Low Differential Pressure Sensor)





# Precision Sensors Division



Precision Sensors has served the aerospace and defense industries for over 50 years and has been a major supplier to the semiconductor process industry for over 30 years. Precision Sensors' ultra clean products are specified for critical pressure, flow and liquid sensing applications requiring high reliability, long-term operation and safety.

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- On-line via our "Ask An Engineer" form
- Email [askanengineer@precisionsensors.com](mailto:askanengineer@precisionsensors.com)
- By phone 203.877.2795



## Quality System:

Certification of Approval to ISO 9001:2015 and AS9100 Revision D.

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**UE**  
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