

# UltraStable 300

## High Stability Stainless Steel Pressure Transducer

**The low cost UltraStable 300 series** incorporates stainless steel isolation, and a wide range of standard pressure ranges and electrical outputs in a very compact package. This product uses IC Sensors' UltraStable technology that provides stability over a wide temperature range, performance previously available only in much higher priced sensors. The modular design is

adaptable to a wide variety of pressure ports and electrical connectors. Standard outputs include 0 to 100mV constant voltage and constant current excitation, 0.5V to 4.5V ratiometric, 1V to 5V regulated and 4 to 20mA current loop.



### FEATURES

- ◆ 0.1% accuracy
- ◆ -40° C to 105°C operating temperature
- ◆ 100% stainless steel 316L isolation.
- ◆ Wide variety of pressure ranges and electrical outputs
- ◆ Low cost and compact package
- ◆ UltraStable technology

### APPLICATIONS

- ◆ Refrigeration and HVAC controls
- ◆ Compressed gasses
- ◆ Process control
- ◆ Water pressure monitoring

### environmental performance

Specification	Units	Amplified			Notes
		Min.	Typ.	Max.	
Thermal effect on Offset -20°C to 85°C	% Span	-1.5	±0.75	1.5	1,2,3
Thermal effect on Span -20°C to 85°C	% Span	-1.5	±0.75	1.5	1,2,3
Operating temperature	Deg. C	-40	25	105	

Notes:  
 1) With reference to 25C  
 2) Other temperature ranges available  
 3) Tighter temperature calibration available

### static performance specifications

	Units	Compensated low level 0 to 100 mV			Amplified Ratiometric 0.5 – 4.5 V out			Amplified 1 – 5 V out			Amplified 4 to 20 mA			Notes
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Offset	% Span	-1	±0.5	+1	-1	±0.5	+1	-1	±0.5	+1	-1	±0.5	+1	1, 2, 3
Span	% Span	-1	±0.5	+1	-1	±0.5	+1	-1	±0.5	+1	-1	±0.5	+1	1, 2, 3, 6
Accuracy	% Span	-.15	±0.1	+.15	-.15	±0.1	+.15	-.15	±0.1	+.15	-.15	±0.1	+.15	2, 4, 7
Long Term Stability	% Span		±0.1			±0.1			±0.1			±0.1		
Response Time	ms	1			1			1			1			
Supply Voltage	V	5	10	13	4.75	5	5.25	8		30	10	24	30	6
Supply Current	mA		1	2	2.5	3	5	2.5	3	5				
Output Impedance	kohms	4	12	30										1, 2
Isolation	Mohm	50			50			50			50			5

Notes:  
 1) Output loading may affect performance  
 2) Room temperature calibration (25C)  
 3) Custom offset & span calibration available  
 4) Combined BFSL linearity, hysteresis & repeatability

5) @50VDC  
 6) For low level (100mV) sensors span is ratiometric to supply (10mV/volt output)  
 7) For pressures ≥ 1 Kpsi, .25% BFSL



Schaevitz  
 IC Sensors  
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 Piezo Film

## mechanical specifications

Specification	Value	Notes
Proof pressure	3x rated pressure or 15,000 psi	2
Burst pressure	4x rated pressure or 20,000 psi	2
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514-2, Curve L	
Shock	100g 11ms	
Pressure cycles	1 million cycles 0 to full scale	
Media compatibility	All materials compatible with 316 stainless steel	1
Environmental protection	IP 67 (Cable version)	

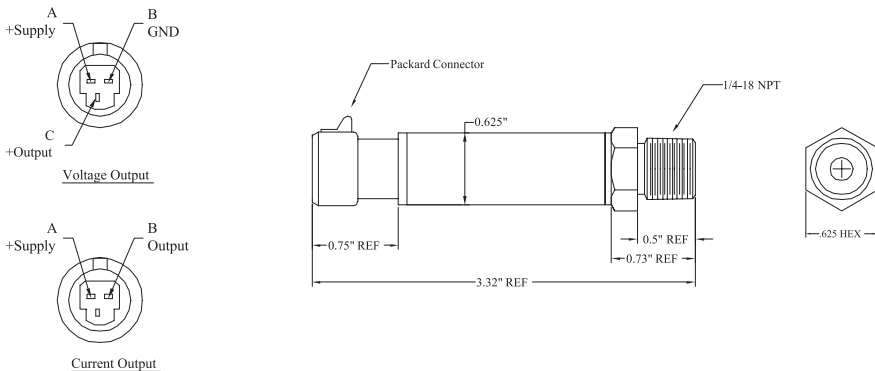
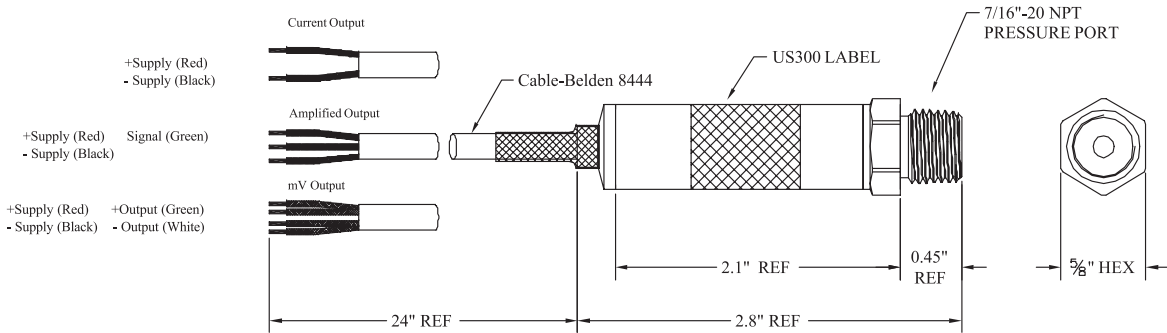
1) Other materials available - consult factory

2) Which ever is less, 10X burst available on some pressure ranges (consult factory)

## ordering information

Model	Output	Connection	Options	Pressure Port	Pressure Range/Units	Pressure Reference
US3	1= 75 to 150mV (5) 2= 0 to 100 mV (1,2) 3= 0.5 to 4.5 V (1,3) 4= 1 to 5 V 8= 4 to 20 mA	1= 2 ft cable 2= 4 ft cable 3= 10 ft cable 4= Packard (4)	00000  Fill options alphabetically from left  1nnnn= custom drawing number	2= 1/4-19 BSP 4= 7/16-20 UNF 5= 1/4-18 NPT 6= 1/8-27 NPT	015P=0 to 15psi 030P=0 to 30psi 050P=0 to 50psi 100P=0 to 100psi 300P=0 to 300psi 500P=0 to 500psi 01KP=0 to 1Kpsi 03KP=0 to 3Kpsi 05KP=0 to 5Kpsi	001B=0 to 1Bar 002B=0 to 2Bar 005B=0 to 5 Bar 007B=0 to 7 Bar 010B=0 to 10 Bar 020B=0 to 20 Bar 035B=0 to 35 Bar 070B=0 to 70 Bar 100B=0 to 100 Bar 200B=0 to 200 Bar 350B=0 to 350 Bar
	X= Special output	X= Special connection		X= special port		
1)	For ratiometric output, span changes with input voltage			4)	Not suitable for mV output units	
2)	At 10 V supply			5)	Consult factory for current supply	
3)	At 5 V supply					
Example	US381-000005-500PG				4 to 20 mA output with 2 ft of cable. There are no options and the unit has a 1/4 NPT port.	
	US321-12345X-300PG				0 - 100 mV output ratiometric (10 mV/V) with 2 ft cable. Unit is to custom drawing 12345 and has a special pressure port. Pressure range is 300 psi gauge	

## mechanical dimensions



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