

Model A1000 High Pressure Transducer Aerospace Grade (High Temperature)



STANDARD FEATURES

- Outputs - 4-20mA, 0-5V & 0-10V – custom outputs available
- Pressure ranges 0-20,000 through 0-150,000 PSI
- Accuracies to 0.15% BFSL
- Strain Gauge sensor technology for high temperature stability
- Eliminate Noise – Maximum RFI/EMI protection on every transducer
- Unparalleled long-term stability
- Temperature compensation at the sensor element.
- Custom designs available (contact factory)

OPTIONAL FEATURES

- Customer specified electrical terminations
- Custom customer specified calibrations

NOTE: BPA Product



The PT Instruments Model A1000 is a bonded strain gage transducer designed for applications requiring ultra high pressures of greater than 20,000 PSI. The transducer is small and lightweight to provide flexibility for a wide range of applications. The series A1000 series can be modified to adapted to virtual any pressure port or electrical connector.

Performance @ 25°C (77°F)		Electrical Data	
Over pressure protection:	120% Rated Pressure	Excitation:	Dependant on configuration
Burst Pressure:	150% Rated Pressure	Input Resistance (mV/V):	1000 +/- 100
Thermal Zero shift:	.01% F.S. per °F max.	Output Resistance mV/V):	1000 +/- 100
Thermal Sensitivity shift:	.01% F.S. per °F max.	Output at Zero Pressure:	0 +/- 5% F.S.
Non-linearity and Hysteresis combined:	+/- .25%	Full Scale (F.S.) Sensitivity:	0.25%
Max. (best straight line method)			
Repeatability:	Within +/- .10% F.S. max.		
Environmental Data		Mechanical data	
Operating temp:	-40 to +121°C (-40 to +250°F)	Sensor wetted material:	15-5 PH stainless 13-8 PH stainless optional
Storage temp:	-50 to +121°C (-58 to +250°F)	Body and Pressure Cavity:	Stainless Steel hermetically sealed
Compensated range:	-25 to +110°C (-13 to +230°F)	Pressure connection:	Mates with fitting per Autoclave, 1-14 NS, others on review
Acceleration:	20 G's per MIL-STD-810, method 513.1, PROC. I	Weight:	10 ounces max.
Vibration:	20 G's per MIL-STD-810, method 514.1, PROC. V, PART I	Electrical Connection:	Electrical pig tail (others available on application)
Shock:	30 G's per MIL-STD-810, method 516.1, PROC. IV		

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Ordering guide – Example: A1000-A-(0-500PSI)-2-D-5-EC2

A	(0-500)	2	D	5	EC1
Pressure Port	Range	Units	Output	Accuracy	Connector
B=SAE-4 (w/o-ring) C=Other E=Autoclave F250C	Specify Pressure Range in PSI, BAR, kPa or inches WC	1=Absolute 2=Gauge 3=Vacuum 4=Sealed 5=Compound 6=Other	D=4-20mA E=0-5VDC F=0-10VDC M=mV/V X=Other (4-wire, isolated versions available – Contact Factory)	5=0.5% BFSL* 2=0.2% 1=0.1%	EC1=36" pigtail EC2=DIN 43650 with mate-Large EC3=Mini DIN EC4=Bendix 6-pin EC9=1/2" NPT conduit connection with 36" leads ECT=Turck M12 ECX=Other

*BFSL = Best Fit Straight Line

Dimensions:

(For reference only: Actual dimensions may vary, contact PT Instruments for exact dimensions for your applications)

Drawing Coming Soon

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Stability & repeatability testing:

Each A1000 pressure sensor as tested per Steps 1 through 5 below will exhibit a zero balance and sensitivity stability within 0.15% F.S. from Step 1 to Step 5. Zero balance and sensitivity from Step 2 will repeat that of Step 4 within $\pm 0.15\%$ F.S

Step 1: Stabilize unit 4 hours at +100°F. Record output at 0 to 100% F.S. in 25% F.S. pressure steps.

Step 2: Stabilize unit 4 hours at +200°F Record output at 0 to 100% F. S. in 25% F.S. pressure steps.

Step 3: Five pressure cycles from ambient to F.S. pressure and return. Hold 10 minutes at F.S. pressure steps.

Step 4: Within two hours after Step 3, record output at 0 to 100% F.S. in 25% F.S. pressure steps.

Step 5: Stabilize unit 12 hours minimum at +100°F. Record output at 0 to 100% FS. in 25% F.S. pressure steps.

Modifications: Specifications on this data sheet represent the standard configuration only. We recognize that transducer applications vary and our designs are flexible. We offer options on material compatibility, pressure port configuration, electrical termination and performance characteristics.

Warranty: PT Instruments warrants that its product shall be free from defective workmanship and/or materials for a 12 month period from the date of shipment provided that PT Instruments obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by PT Instruments. This warranty is in lieu of all other warranties expressed or implied.

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