

Model 1500 Pressure/Temperature Transducer



- Temperature & Pressure outputs from one transducer.
- Eliminate Drift – Fused Bond sensor technology for long-term stability
- Eliminate Noise – Maximum RFI/EMI protection on every transducer
- Outputs - 4-20mA, 0-5V & 0-10V – custom outputs available
- Pressure ranges 0-1 to 0-30,000 PSI
- Accuracies to 0.1% BFSL
- Unparalleled long-term stability
- Temperature compensation at the sensor element.
- Custom designs available (contact factory)

Spectre's Model 1500 transducer incorporates all of the features of the Model 1000 with the addition of a temperature output. It's large, raw sensor output (10-70X that of a bonded foil strain gauge device), Long term stability of the Model 1500 and standard RFI/EMI protection provide the most rugged and reliable transducer for industrial applications. Originally designed to withstand the rigorous testing requirements of defense and space applications, The Model 1500 offers aerospace performance to the industrial marketplace.

Performance @ 25°C (77°F)

Accuracy: $\leq \pm 0.5\%$ BFSL (0.2% and 0.1% optional)
Stability (2 year): $\leq \pm 0.05\%$ FS, typical
Over pressure protection: 2X Rated Pressure
Burst Pressure: 5X minimum
Pressure Cycles: >50 Million
Temperature range: -40 to +100°C (-40 to + 212°F)
Optional: -60 to + 130°C (-76 to +266°F)
Temperature Accuracy: $\pm 1^\circ\text{C}$ ($\pm 2^\circ\text{F}$)

Environmental Data

Operating temp: -40 to + 85°C (-40 to +185°F)
(Optional to +275°F – con sult factory)
Storage temp: -50 to +125°C (-60 to +250°F)
Compensated range: 0 to 50°C (-32 to +125°F)
Temp comp Zero: $\leq \pm 1.5\%$ FS
Temp comp Span: $\leq \pm 1.5\%$ FS

Electrical Data

Excitation:
9-36 Vdc (4-20mA and 0-5 Vdc outputs)
13-36 Vdc (0-10 Vdc output)
Option C29: Maximum 29 Vdc excitation
Current consumption: <5 mA (voltage outputs)
Zero offset: $\leq \pm 0.25\%$ of FS
Span tolerance: $\leq \pm 1.0\%$ of FS
Output load: >10K Ohm

Physical data

Sensor wetted material: 17-4 PH stainless (optional:
316 stainless steel)
Pressure connection: 1/4 male NPT, SAE-4
(others on application)
Electrical Connection: Cable, DIN, Cannon, Bendix
(others available on application)

Spectre Sensors

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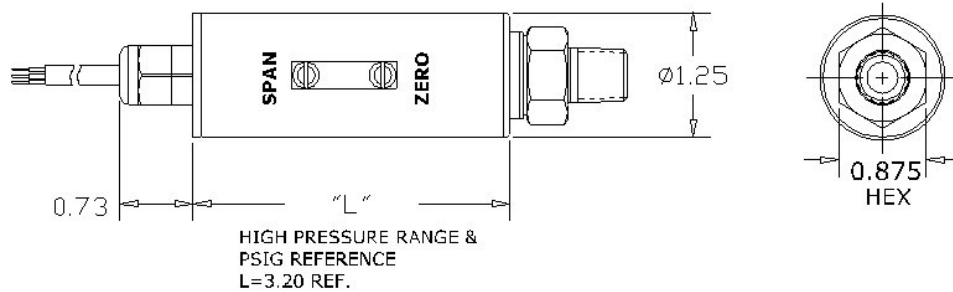
Ordering guide – Example: 1500-A-(0-500PSI)-2-D-5-EC1

A	(0-500)	2	D	3	5	EC1
Pressure Port	Range	Units	Pressure Output	Temperature Output	Accuracy	Connector
A=1/4" MNPT B=SAE-4 (w/o-ring) C=Other D=1/8" MNPT E=Autoclave F-250-C**	Specify Pressure Range in PSI, BAR or kPa	1=Absolute 2=Gauge 3=Vacuum 4=Sealed 5=Compound 6=Other	D=4-20mA E=0-5VDC F=0-10VDC X=Other	3=Thermocouple (specify J or K) 4=RTD, 100 ohm Platinum, 2-wire. 5=Other	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

*BFSL = Best Full Scale Line

** Autoclave F-250-C required on ranges above 10,000 PSI

Dimensions



For pressure ranges below 300 PSI, the "L" dimension is 4.20"

Current output wiring

Wiring	4-20mA, DIN 43650
Pin 1	+ excitation
Pin 2	- excitation/signal
Pin 3	no connection
Pin 4	no connection
Power	9-32 Vdc

Wiring	4-20mA, Cable
White	+ excitation
Black	- excitation/signal
Power	9-32 Vdc

Voltage output wiring

Wiring	Voltage, DIN 43650
Pin 1	+ excitation
Pin 2	+ signal
Pin 3	- excitation/signal
Pin 4	no connection
Output	Power
0-5 Vdc	9-32 Vdc
0-10 Vdc	13-32 Vdc

Wiring	Voltage, Cable
Red	+ excitation
Green	+ signal
Black	- excitation/signal
White	no connection
Output	Power
0-5 Vdc	9-32 Vdc
0-10 Vdc	13-32 Vdc

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