P51 Pressure Sensor

Product Overview

The MediaSensor™ (P51) family of bulk micromachined, absolute, sealed and gauge pressure sensors are for both harsh and benign media with superior accuracy over operating temperature. These compact, robust sensors are well suited for a variety of automotive, industrial and commercial applications.

Typical Applications

- Refrigeration
- HVAC
- Fuel Cells
- Process Controls
- Pumps
- Agriculture
- Hydraulics
- Pneumatics
- Compressors
- Spray Systems
- Flow
- Robotics

Technical Specifications

Maximum Pressure	Accuracy	Maximum Operating Temp.
7,500 PSI	< ± 1.00% FS	125 °C

Output Type	0.5 - 4.5 V	1 - 5 V	4 - 20 mA
Accuracy 15-50 or 751-5,000 PSI (at 22 °C)	< ± 1.00% FS	< ± 1.00% FS	< ± 1.00% FS
Accuracy 51-750 PSI (at 22 °C)	< ± 0.50% FS	< ± 0.50% FS	< ± 0.50% FS
Temp Error 15-50 or 751-5,000 PSI (-40 °C to 105 °C)	< ± 1.00% FS	< ± 1.00% FS	< ± 1.00% FS
Temp Error 51-750 PSI (-40 °C to 105 °C)	< ± 0.50% FS	< ± 0.50% FS	< ± 0.50% FS
Zero Pressure Offset	0.50 V	1.0 V	4.0 mA
Full Scale Output (at Pressure FS)	4.50 V	5.0 V	20.0 mA
Operating Temperature	-40 °C to 125 °C	-40 °C to 125 °C	-40 °C to 125 °C
Storage Temperature	-40 °C to 125 °C	-40 °C to 125 °C	-40 °C to 125 °C
Operating Temp. (Harnessed Sensor)	-40 °C to 105 °C	-40 °C to 105 °C	-40 °C to 105 °C
Storage Temp. (Harnessed Sensor)	-40 °C to 105 °C	-40 °C to 105 °C	-40 °C to 105 °C
Proof Pressure	2X FS	2X FS	3X FS
Burst Pressure - ABS/Sealed Gauge (lesser of two)	10X FS or 15,000 PSI	10X FS or 15,000 PSI	10X FS or 15,000 PSI
Burst Pressure - Gauge	3X FS	3X FS	3X FS
Reverse Voltage (± 16 V over 5 min.)	Available	Available	Available
Overvoltage (± 16 V over 5 min.)	Available	Not Available	Not Available

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Output Type	0.5 - 4.5 V	1 - 5 V	4 - 20 mA
Supply Voltage	5 ± 0.5 Volts	8 to 30 Volts	8 to 30 Volts
Current Draw	< 6 mA	< 3 mA	Not Applicable
Output Type	0.45 mA max (sink or source)	0.45 mA max (sink or source)	4 - 20 mA
Response Time (Pressure/Output)	< 1 ms	< 1 ms	< 1 ms

Parameter	Value	Units
Pressure/Temperature Cycles	> 1.8 x 10	Cycles
Thermal Shock	250	Cycles
Vibration	144	Hours
EMC Compatibility	150	V/m
Humidity	250	Hours
Weight	≤ 85	Grams

Chemical Compatibilities

Any gas or liquid compatible with 304L and 316L stainless steel. (Including but not limited to motor oil, diesel, hydraulic fluid, brake fluid, water, wastewater, hydrogen, nitrogen, and air.) Designed to be used in media isolated mediums.

Agency Approvals & Certifications

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