### **Product Description**

SSI Technologies Inc., a leading OEM supplier of automotive sensors, having delivered more than 100 million sensors to its customers, now offers a new series of **MediaSensor™** pressure sensors where ultra low pressure, cost, compact size, robust packaging, chemical compatibility and performance are critical.

These new MediaSensor ™ P51 Series ULG bulk micromachined, gage pressure sensors are designed to work at ultra low pressure ranges (3 psi, 5 psi and 10 psi) over an operating temperature range of -40°C to +105°C with a superior accuracy of <±1.0%.

The ULG series pressure sensors are cost competitive, compact, have robust packaging with a wide variety of fittings that work in both harsh and benign media. They are ideal for a variety of pressure measurement applications in the automotive, industrial and commercial industries. Two different electrical signal outputs are available for use by computers, digital panel meters, PLCs, chart recorders and other devices that can display, record or change the pressure in a closed loop system.

#### **Product Features**

- Pressure Ranges:
  - o 3 psig (20.7kPa),
  - o 5 psig (34.5 kPa)
  - o 10 psig (68.9 kPa)
- Superb Accuracy: <± 1.0 % includes Repeatability, Hysteresis and Linearity
- Compact, Robust Package: All laser-welded stainless steel design for optimal media isolation
- Standard and Custom Options



MediaSensor<sup>TM</sup> Ultra Low Pressure Sensors with integrated signal conditioning (shown with Packard Connector and Integral Harness)

- Maximum Flexibility: Custom ASIC provides signal conditioning for calibration and temperature compensation.
- Electrical Connectors
  - o Packard
  - Integral Harness
- Electronics
  - $\circ$  0.5 4.5 Volt output (with 5V input)
  - 0 1 5 Volt Output (with 8 30V input)
  - 4-20mA Output ( with 8 30V input)

Call us at (888) 477-4320 or visit our

Web Site: http://ssitechnologies.com

SSI TECHNOLOGIES, INC.

Controls Division 1309 Plainfield Ave. Janesville, WI 53545-0450

Phone: (608)758-1500 Fax: (608) 758-2491

www.ssitechnologies.com







Chemical Compatibilities: Any gas or liquid compatible with 304L & 316L stainless steel.

Refrigerant

Brake Fluid

- Water
- Motor Oil
- Waste Water

Diesel

- Hydrogen
- Nitrogen
- Air

Refrigeration

**Typical Applications** 

- Fuel Cells
- Pumps
- Hydraulics
- Pneumatics
- Agriculture
- Process Control

### **Typical Connections**

Hydraulic Fluid

The following torque limits should be used when mounting the MediaSensor™ pressure port.

	Recommended Torque	
Straight Thread w/O-Ring:	150 in lb	
NPTF Thread:	2 T.F.F.T. (Turns From Finger Tight)	

### MediaSensor™ Transducer (Voltage Output) connections:

- 1) Connect the Power Lead (Red) to the + terminal of the supply voltage.
- 2) Connect the Ground Lead (Black) and the terminal of the supply voltage to input of your voltage measurement equipment.
- 3) Connect the Vout Lead (White) to the + input of your voltage measurement equipment.

SSI TECHNOLOGIES, INC.

Controls Division 1309 Plainfield Ave. Janesville, WI 53545-0450

Phone: (608)758-1500 Fax: (608) 758-2491

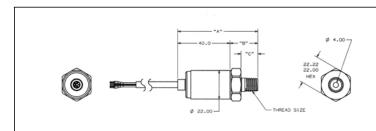
www.ssitechnologies.com





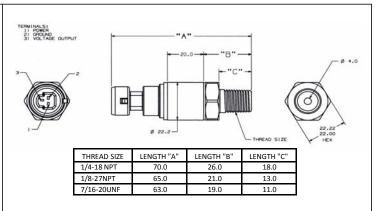


## **Standard Packaging Options**



THREAD SIZE	LENGTH "A"	LENGTH "B"	LENGTH "C"	
1/4-18 NPT	66.6	26.0	18.0	
1/8-27NPT	61.6	21.0	13.0	
7/16-20UNF	59.6	19.0	11.0	

#### **Integral Harness with 22mm Hex**

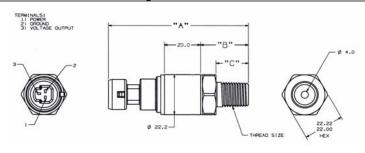


#### Packard Connector with 22mm Hex

5 Vdc Input: 0.5 - 4.5 Vdc Ratiometric Output

Harness Construction: PVC Jacketed 24 AWG Wire

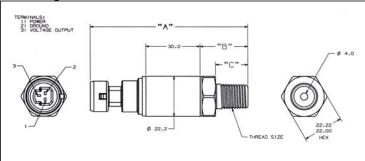
Mating Packard Connector P/N 12065287 and Mating Packard Terminal P/N 12103881



THREAD SIZE	LENGTH "A"	LENGTH "B"	LENGTH "C"
1/4-18 NPT	70.0	26.0	18.0
1/8-27NPT	65.0	21.0	13.0
7/16-20UNF	63.0	19.0	11.0

#### Packard Connector with 22mm Hex

8 - 30 Vdc Input: 1 - 5 Vdc Output



THREAD SIZE	LENGTH "A"	LENGTH "B"	LENGTH "C"	
1/4-18 NPT	80.0	26.0	18.0	
1/8-27NPT	75.0	21.0	13.0	
7/16-20UNF	73.0	19.0	11.0	

#### Packard Connector with 22mm Hex

8 - 30 Vdc Input: 4 - 20 mA Output

Mating Packard Connector P/N 12065287 and Mating Packard Terminal P/N 12103881

#### SSI TECHNOLOGIES, INC.

Controls Division 1309 Plainfield Ave. Janesville, WI 53545-0450

Phone: (608)758-1500 Fax: (608) 758-2491

www.ssitechnologies.com







#### Performance Specifications (all values at 22°C unless noted otherwise)

Output Type	0.5 to 4.5 Volts	1 – 5 Volts	4-20mA	
Accuracy <sup>1</sup>	<± 1.00% FS	<± 1.00% FS	<± 1.00% FS	
Thermal Error <sup>2</sup> (-40°C to 105°C)	<± 2.00% FS	<± 2.00% FS	<± 2.00% FS	
Stability (Typical)	<± 0.25% FS / Year	<± 0.25% FS / Year	<± 0.25% FS / Year	
Zero Pressure Offset 3	0.50 V	1.0 V	4.0 mA	
Full Scale Output <sup>(</sup> Output @ Pressure Range)	4.5 V	5.0 V	20mA	
Operating Temperature	-40 to 105°C	-40 to 105°C	-40 to 105°C	
Storage Temperature	-40 to 105°C	-40 to 105°C	-40 to 105°C	
Proof Pressure	3 X FS	3 X FS	3 X FS	
Burst Pressure Gage Pressure Transducers	10 X FS	10 X FS	10 X FS	

### **Electrical Specifications**

Output Type	0.5 to 4.5 Volts	1 – 5 Volts	4-20mA
Supply Voltage	5 +/- 0.5	8 to 30 Volts	8 to 30 Volts
Supply Current	< 6 mA	< 3 mA	N/A
Output Current	0.45mA Max(Sink or Source)	0.45mA Max(Sink or Source)	N/A
Response Time	< 1 ms	< 1ms	< 1ms

### **Reliability and Environmental Performance**

	Test Conditions	Value	Units
Pressure/Temperature Cycles <sup>4</sup>	0 to FS @ 8Hz; and -40°C to 85°C	>1.8x10	Cycles
Thermal Shock	85°C to -40°C, 0.5 hr soaks at Temp. (2s Transfer)	250	Cycles
Vibration	10 to 2050 Hz, 20 Sinusoidal, 3 Axes	144	Hours
EMC Compatibility	10 Volts/meter per EN 61000-4-3		
Humidity	85°C and 90% to 95% R. H.	250	Hours
Weight	Model 51 with 1/4 - 18 NPT 304L Stainless Port	≤85	Grams

<sup>&</sup>lt;sup>1</sup>Includes hysteresis, repeatability, & non-linearity (BFSL)

#### SSI TECHNOLOGIES, INC.

Controls Division
1309 Plainfield Ave.
Janesville, WI 53545-0450

Phone: (608)758-1500 Fax: (608) 758-2491

www.ssitechnologies.com







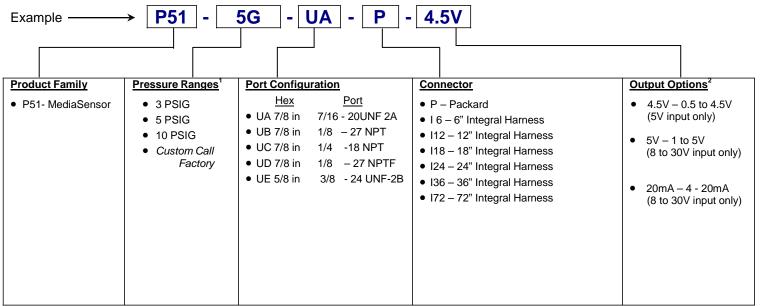
<sup>&</sup>lt;sup>2</sup>Additional error over temperature

<sup>&</sup>lt;sup>3</sup>Transducer output @ 0 Psig,

<sup>&</sup>lt;sup>4</sup>Pressure cycling performed at rated full scale pressure.

#### MediaSensor™ Series ULG Ultra Low Pressure Sensor Ordering System

The following explains SSI's ultra low pressure sensor order number sequence.



#### Notes:

- 1) G designates Gage Pressure
- Calibration of the transducer is as follows:
  - a. Gage Transducers are calibrated to have 0.5 Vdc or 1 Vdc, or 4mA respectively at 0 Psig

To place an order or to view our other pressure sensors, please see our website http://www.ssitechnologies.com for a listing of our distribution partners and Regional Sales Managers

For custom orders or specifications not listed, call SSI toll-free at 1-888-477-4320

Controls Division 1309 Plainfield Ave. Janesville, WI 53545-0450

Phone: (608)758-1500 Fax: (608) 758-2491

www.ssitechnologies.com





