



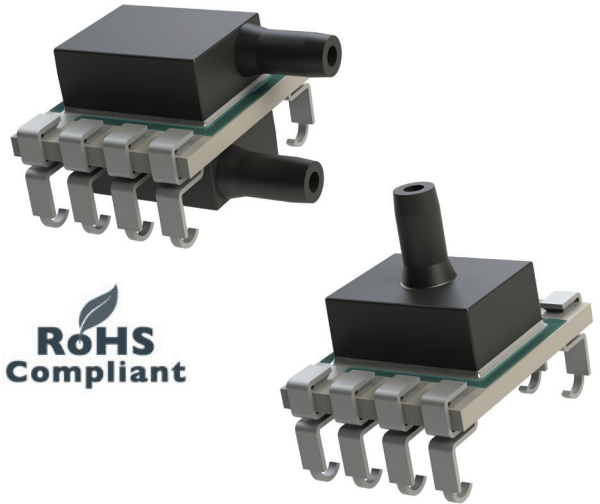
LP Series - Uncompensated is a surface mountable pressure sensor package with an uncompensated output suitable for ultra-low pressure sensing applications.

COMPANY: Merit Sensor is a leader in piezoresistive pressure sensing and partners with clients to create high performing solutions for a variety of applications and industries.

SENTIUM: Merit Sensor products incorporate a proprietary Sentium® technology developed to provide a best-in-class operating temperature range (-40°C to 85°C) and superior stability.

TECHNOLOGY: Merit Sensor utilizes a piezoresistive Wheatstone bridge in a design that anodically bonds glass to a chemically etched silicon diaphragm. All products are RoHS compliant.

CAPABILITIES: Merit Sensor designs, engineers, fabricates, dices, assembles, tests, sells and services die and packaged products from a state-of-the-art facility near Salt lake City, Utah



Package options can be customized

FEATURES

Pressure Range	0.15 to 1 psi (10.3 to 68.9 mbar; 1.03 to 6.89 KPa; 4.2 to 27.7 inH <sub>2</sub> O)
Type	Gage and Differential
Media	Clean, Dry Air and Non-corrosive Gases
Packaging	Tape and Reel
Customization	Sensitivity, Resistance, Bridge, Constraint, etc.

BENEFITS

Performance	Enjoy best-in-class performance due to Merit's proprietary Sentium technology
Cost	Save money over time with high-performing die
Security	Feel confident doing business with an experienced company backed by a solid parent company (NASDAQ: MMSI)
Speed	Get to market quickly with creative and flexible solutions
Service	Experience prompt, personal and professional support

**1400 Family Part Number Configurator**

14XX-XXXX-XXXX

<p><b>Bridge</b></p> <p>01 = Open</p> <p>02 = Closed</p>	<p><b>Pressure</b></p> <p>P15 = .15psi</p> <p>P20 = .20psi</p> <p>P30 = .30psi</p> <p>P50 = .50psi</p> <p>1P0 = 1.0psi</p>	<p><b>Reference</b></p> <p>G = Gage</p> <p>D = Differential</p>	<p><b>Pin Type</b></p> <p>1 = J-lead</p>	<p><b>Port</b></p> <p>1 = Dual horizontal, facing same side</p> <p>2 = Vertical top, horizontal bottom</p> <p>3 = Vertical top, bottom vent</p> <p>4 = Horizontal top, bottom vent</p> <p>5 = Dual Horizontal, facing opposite sides</p>
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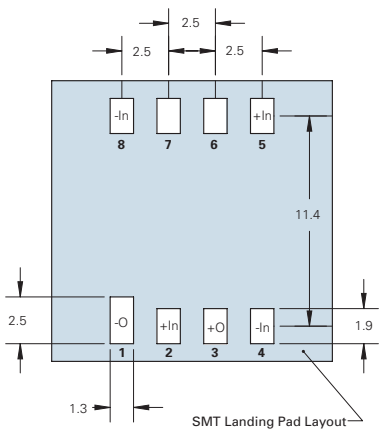
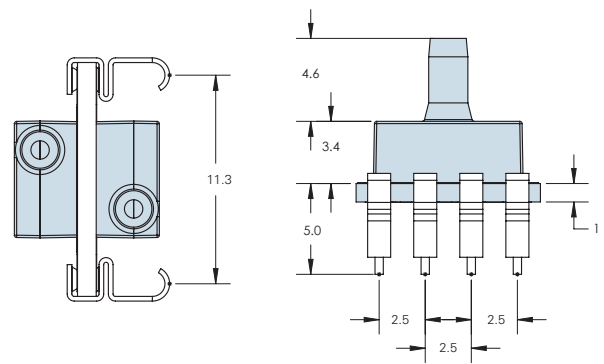
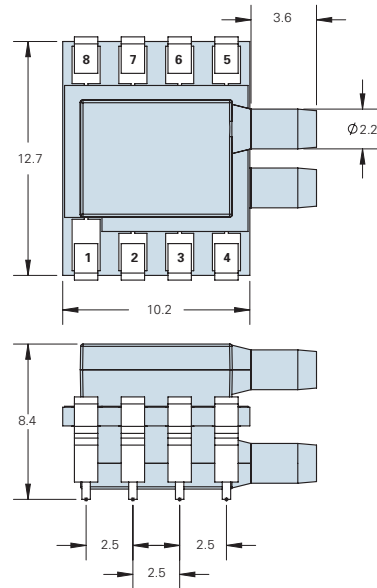
**SPECIFICATIONS**

Parameter	Minimum	Typical	Maximum	Units	Notes
<b>Electrical</b>					
Excitation (In)		5	15	V	(1)
Impedance	4000	5000	6000	$\Omega$	
Operating Temperature	-40		85	$^{\circ}\text{C}$	
Storage Temperature	-55		100	$^{\circ}\text{C}$	
<b>Performance</b>					
Offset	-5	0	5	mV/V	(2)(3)(4)
Non-linearity	-0.2	0	0.2	% FSO	(4)(5)
Pressure Hysteresis	-0.1	0	0.1	% FSO	(4)
Temp Coeff - Zero	-25	0	25	$\mu\text{V/V}/^{\circ}\text{C}$	(6)
Temp Coeff - Resistance	2300	2800	3300	PPM/ $^{\circ}\text{C}$	(6)
Temp Coeff - Sensitivity	-1500	-2200	-2500	PPM/ $^{\circ}\text{C}$	(6)
Thermal Hysteresis	-0.25	0	0.25	% FSO	(2)
Long-term Stability	-0.25	0	0.25	% FSO	
Proof Pressure	3X				(7)
Burst Pressure	5X				(7)
<b>Full Scale Output (@ 5 volts)</b>					
0.15psi	30	37.5	45	mV	
0.20psi	32	40	48	mV	
0.30psi	36	45	54	mV	
0.50psi	40	50	60	mV	
1.00psi	40	50	60	mV	

**Notes:**  
 (1) Maximum 3 mA  
 (2) Zero pressure  
 (3) Gage only  
 (4) @25°C  
 (5) Best fit straight line  
 (6) -40°C to 85°C  
 (7) Full scale pressure

**Media Compatibility**

For Use with non-corrosive dry gasses  
 Solder temperature: max 250  $^{\circ}\text{C}$ , 5 seconds max


**DIMENSIONS (millimeters)**

**SENSOR BRIDGE Pin-out**
