

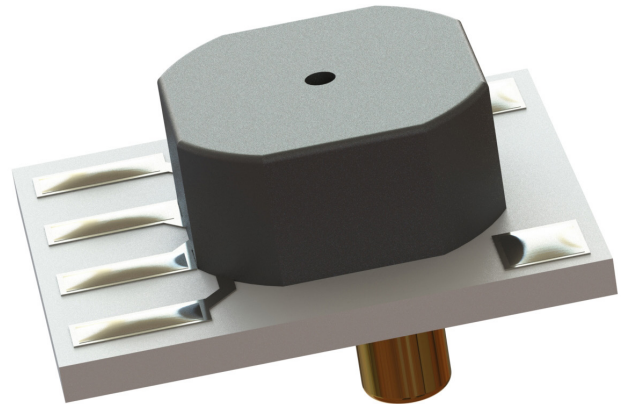


The Merit Sensor RS Series uncompensated packaged sensor is designed for the application of a wide range of pressures to the backside of the sensing element. The RS is a flexible platform with excellent media compatibility.

COMPANY: Merit Sensor designs and fabricates MEMS piezoresistive pressure sensors at our Utah, USA engineering and fabrication facility. We focus on the customization of technically superior pressure sensors to solve customers' pressure sensing needs for the medical, industrial, automotive and aerospace industries.

TECHNOLOGY: Merit Sensor utilizes a piezoresistive Wheatstone bridge with a chemically etched silicon diaphragm. All products are RoHS compliant.

CAPABILITIES: Merit Sensor designs, engineers, fabricates, dices, assembles and tests all products from a state-of-the-art facility near Salt Lake City, Utah.

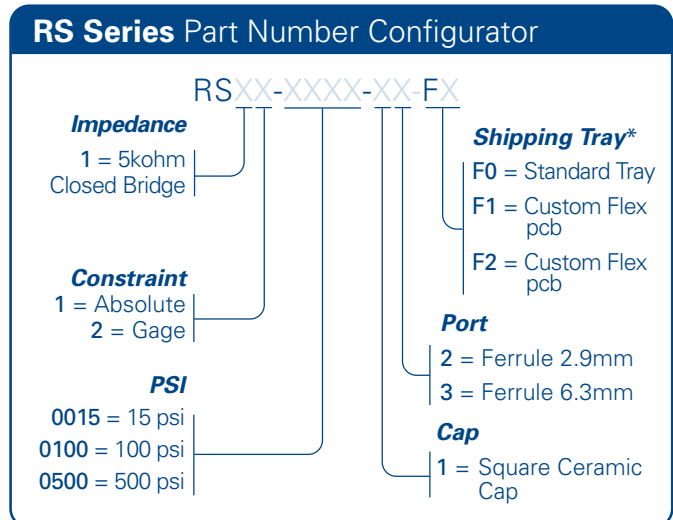


FEATURES

- Uncompensated, packaged pressure sensor
• Pressure Range: 0 to 500psi (0 to 34.474bar)
• Temperature Range: -40°C to +85°C
• Type: Backside gage or backside absolute
• Media: Air, gases and liquids (to be determined on an application-by-application basis with Merit engineering team)
• Shipping: Tape and reel
• Customization: Pressure range, pressure port, gage or absolute
• Excellent performance in both constant current and constant voltage applications
• Simple pressure source attachment and electrical connection
• Designed for a soldered connection to wires, ribbon cable, flex strip, or surface mount pcb

APPLICATION EXAMPLES

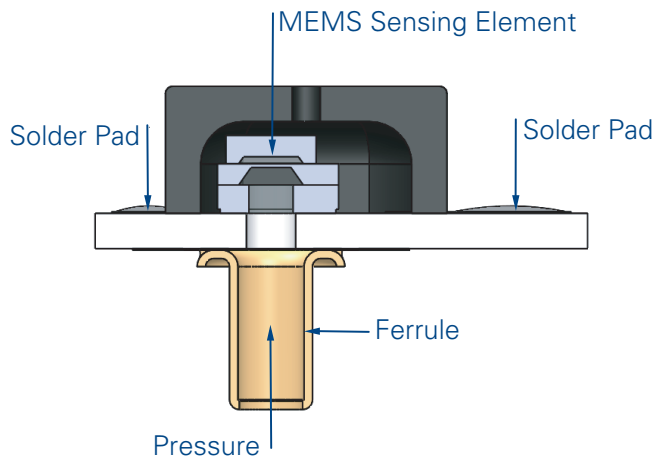
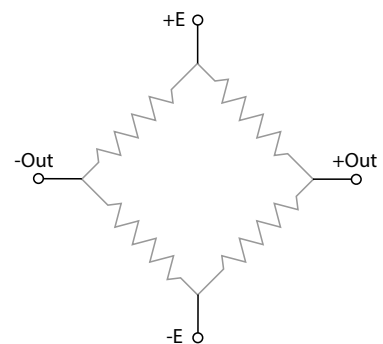
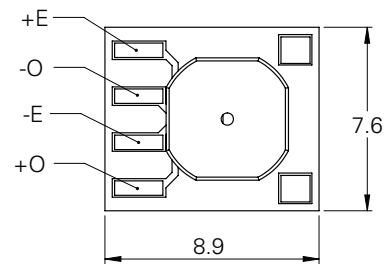
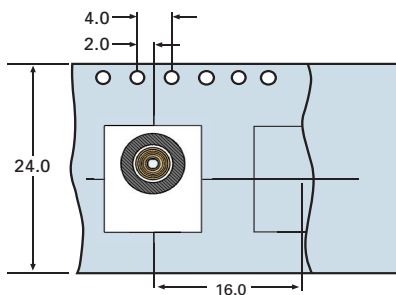
- Medical inflation
• Water pressure and flow management
• Industrial process control



*Default shipping method is Tape & Reel. Shipping Tray option is available.

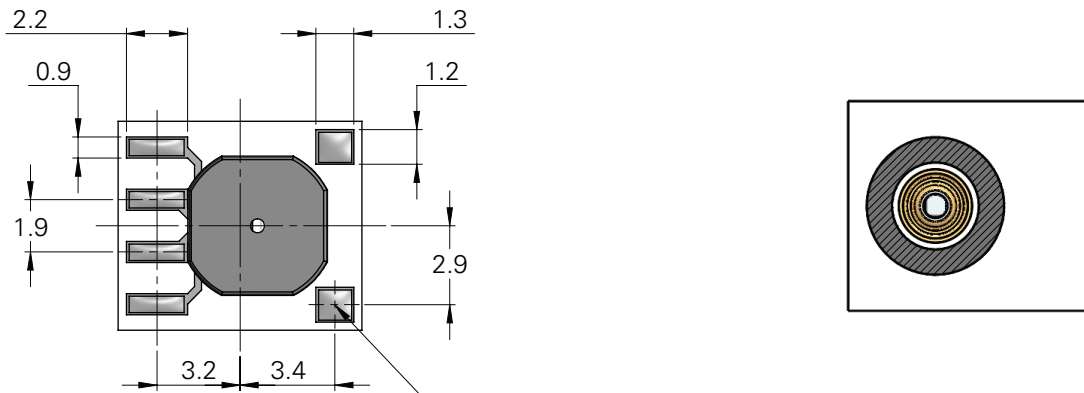
SPECIFICATIONS

Parameter	Minimum	Typical	Maximum	Units	Notes
Electrical & Environmental					
Excitation (In)		5	15	V	Maximum: 3 mA
Impedance	4000	5000	6000	Ω	
Operating Temperature	-40		85	$^{\circ}\text{C}$	
Storage Temperature	-55		100	$^{\circ}\text{C}$	
Performance					
Offset	-10	0	10	mV/V	Zero pressure; gage only; @25 $^{\circ}\text{C}$
Non-linearity	-0.2	0	0.2	% FSO	Best Fit Straight Line; @25 $^{\circ}\text{C}$
Pressure Hysteresis	-0.1	0	0.1	% FSO	@25 $^{\circ}\text{C}$
Temp Coeff – Zero	-25	0	25	$\mu\text{V/V}/^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Temp Coeff – Resistance	2300	2800	3300	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Temp Coeff – Sensitivity	-1500	-2200	-2500	PPM/ $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$
Thermal Hysteresis	-0.2	0	0.2	% FSO	Zero pressure
Burst Pressure	2X				Room Temperature
Full-Scale Output (@ 5 volts Excitation)					
15 psi (1 bar; 103 KPa)	60	75	90	mV	Closed bridge only
100 psi (6.9 bar; 689 KPa)	120	150	180	mV	
500 psi (34.5 bar; 3447 KPa)	140	175	210	mV	

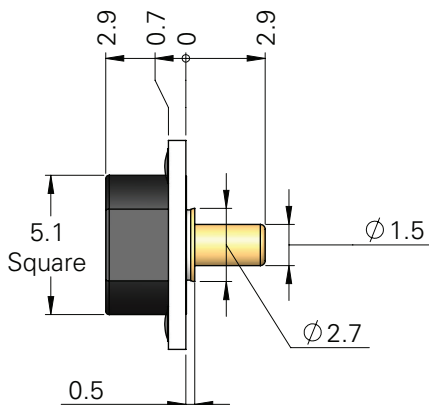
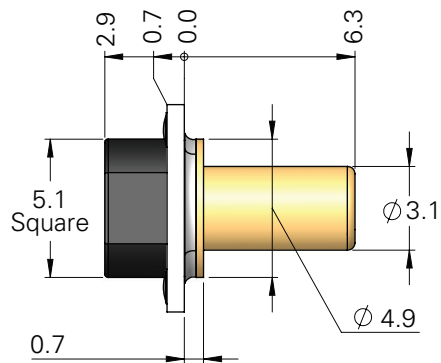
CROSS SECTION

ELECTRICAL

PACKAGING AND SHIPPING (millimeters)


DIMENSIONS FOR STANDARD PACKAGING OPTIONS (in millimeters)

Dimensions for reference only.
 Engineering drawings (with tolerance) available upon order.



6 X Pre-tinned pads
 Square pads for mechanical attachment only

Ferrule (2.9mm)

Ferrule (6.3mm)




Merit Sensor is based in Salt Lake City, Utah

