



RXUM010/RXUH004 Series

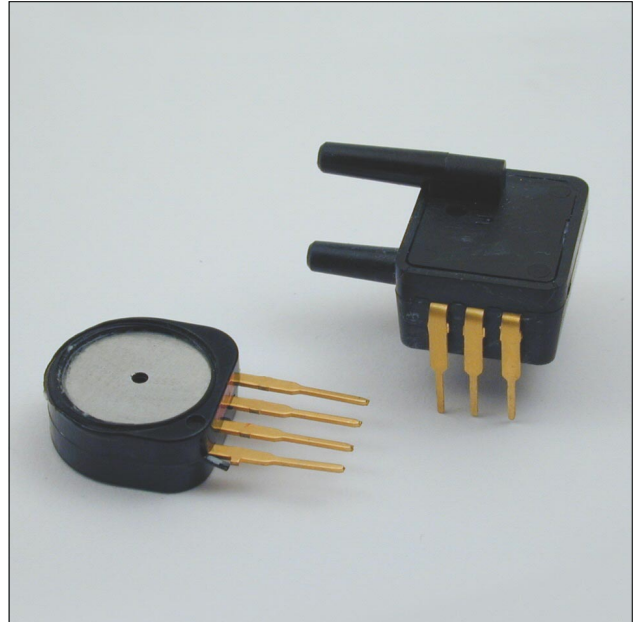
Basic low pressure sensors

FEATURES

- 0...10 mbar or 0...4 inch H₂O, differential and gage pressure
- High impedance bridge
- Low power consumption for battery operation
- Sensortech PRO services

MEDIA COMPATIBILITY

To be used with non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

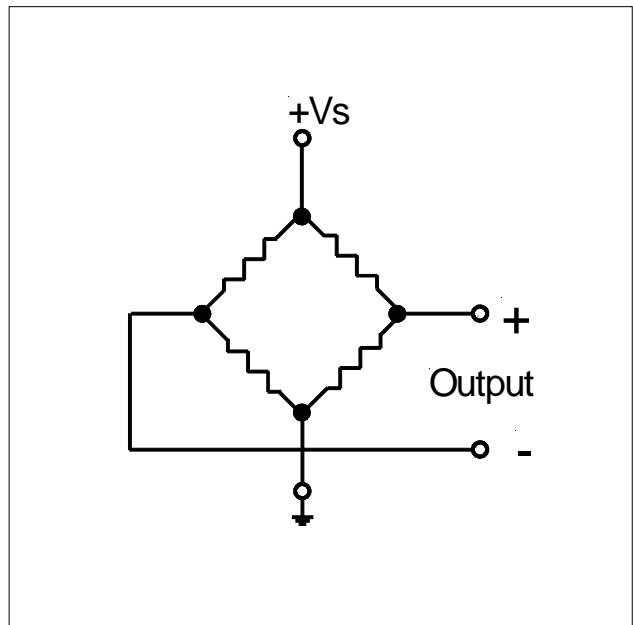


SPECIFICATIONS

Maximum ratings

Supply voltage, V_s	7.5 V _{DC}
Temperature ranges	
Operating	0 to +50°C
Storage	0 to +70°C
Humidity limits (non-condensing)	0 to 100 %RH
Lead temperature (soldering 4 sec.)	250°C
Common-mode pressure	150 "H ₂ O
Proof pressure	25 mbar
Burst pressure ⁸	350 mbar

EQUIVALENT CIRCUIT





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PERFORMANCE CHARACTERISTICS

($V_s = 5.0 \pm 0.01$ V, $T_A = 25$ °C, common-mode pressure = 0 psig, pressure applied to **P2**)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure	RXUM010...			10	mbar
	RXUH004...			4	"H ₂ O
Sensitivity		+1700	+2500	+5500	μV/V/"H ₂ O
Full-scale span ¹		+34	+50	+110	mV
Zero pressure offset		-40	0	+40	
Temperature effects (0 to 50 °C) ^{4,7}	Offset		±4		μV/V/°C
	Span	-2850	-2400	-1950	ppm/°C
	Bridge impedance	+2100	+2300	+2500	
Combined linearity and hysteresis ²			±0.5	±1.0	%FS
Repeatability ³			±0.2		
Long term stability of offset and span ⁶			±0.5		mV
Input impedance			4.7		kΩ
Output impedance			4.7		
Response time ⁵			0.5		ms
Position sensitivity			50		μV/V/g

WARNING:

Due to the delicate nature of these very sensitive devices, some special handling is required. Parts are sensitive to shock and vibration and must be handled with care. Dropping on any hard surface (bench top etc.) can destroy the device. Note 25 mbar overpressure!

Specification notes:

- Span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure.
- Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure. Linearity is the maximum deviation of measure output at constant temperature (25°C) from "Best Straight Line" determined by three points, offset, full scale pressure and half full scale pressure.
- Maximum difference in output at any pressure with the operating pressure range and temperature within 0°C to +50°C after:
 - 100 temperature cycles, 0°C to +50°C
 - 1.0 million pressure cycles, 0 psi to full scale span
- Slope of the best straight line from 0°C and 50°C. For operation outside this temperature, contact Sensortech for more specific applications information.
- Response time for a 0 to full-scale span pressure step change.
- Long term stability over a one year period .
- This parameter is not 100 % tested. It is guaranteed by process design and tested on a sample basis only.
- If the max. burst pressure is exceeded, even momentarily, the package may leak or burst, or the pressure sensing die may fracture.

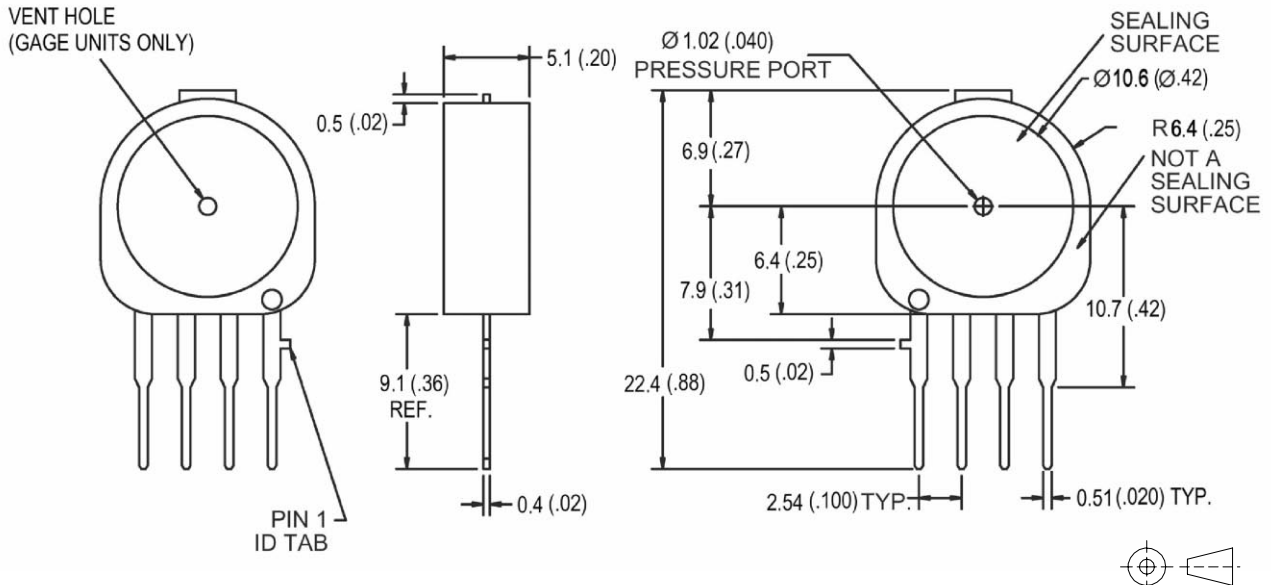


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PHYSICAL DIMENSIONS

Button package

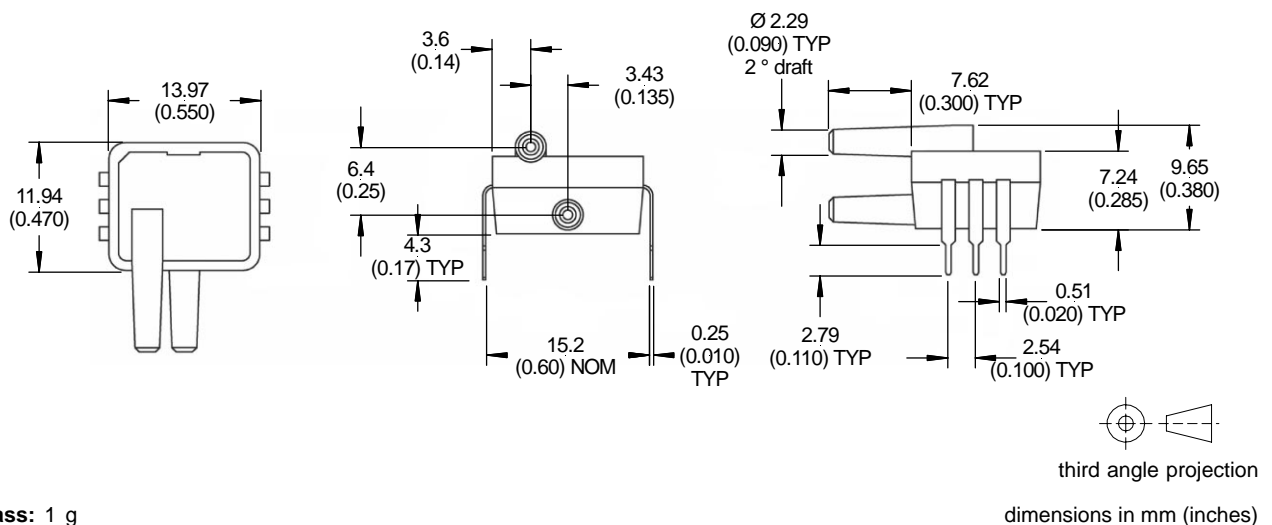


mass: 1 g

Colour codes for Button housing

Colour dot 1	Pressure range	Colour dot 2	Series
White	10 mbar, 4 "H ₂ O	Gold	RXU

DIP package, dual port



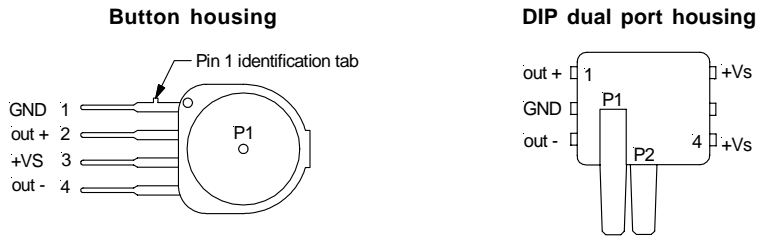
mass: 1 g



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ELECTRICAL CONNECTION



Note: Polarity indicated is for positive pressure applied to port P2 (backward gage)

ORDERING INFORMATION - AVAILABLE LISTINGS

Pressure range	Differential/gage pressure	
	Button package	DIP dual port
0...10 mbar	-	-
0...4 inch H ₂ O	RXUH004D	-

Sensortechincs PRO services:

- Extended guarantee period of 2 years
- Improved performance characteristics
- Custom product modifications and adaptations even for small quantities
- Advanced logistics models for supply inventory and short delivery times
- Technical support through application engineers on the phone or at your site
- Fastest possible technical response for design and QA engineers
- ... plus other services on request

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