

LOW PRESSURE DIFFERENTIAL

TAVIS low pressure differential transducers are ideally suited to applications requiring very low differential pressure measurements. Available in pressure ranges as low as 0.01 PSID, these designs feature low power consumption and a wide input voltage range. The all-welded stainless-steel construction and extremely stable electronics package combine to produce an extremely accurate, yet rugged transducer. Implementations of our low pressure differential include fuel tank telemetry for rockets.

- *High Accuracy*
- *Working Media can be Applied to Both Pressure Ports*
- *Excellent Extended Mission Stability (20+ years)*
- *All Welded Construction*
- *Very Low Pressure Ranges*
- *High Shock Design*
- *Designed for Hydrogen and Oxygen Compatibility*
- *Integrated Lockwire Holes*



TAVIS has provided tailored solutions to our customers since day one. The sample product shown on this data sheet is meant to showcase our engineering and manufacturing capabilities. TAVIS can engineer and manufacture a product that will meet your unique application requirements. From radiation to low pressure, TAVIS transducers will remain stable, even in high vibration and high shock conditions. Contact us today to see how we can best handle your pressure.

SEE SAMPLE SPECS ON NEXT PAGE

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GENERAL SPECIFICATIONS	
Pressure Range	Configurable, from 0-1 PSID to 0-100 PSID
Differential Proof Pressure	200% of MEOP or 20 PSID, whichever is greater
Weight	Less than 48OZ (1361 Grams)
Sensor Type	Variable Reluctance
EEE Reliability Level	NASA-EEE-INST-002 Level 2

- OPTIONS**
- Higher proof pressure configurations available. Consult TAVIS Engineering for more info.
 - Level 1 EEE option available
 - Elevated line pressure
 - Positive or negative over-pressures

PERFORMANCE DETAIL

Total Error Band¹
± 1.5% Full Calculated Span Maximum

Frequency Response²
Flat ± 5% to 250 Hz

Resolution
Effectively Infinite

Acceleration Sensitivity
Dependent on pressure range

¹ Total Error Band is defined as the root sum squared (RSS) maximum allowed error due to non-linearity, hysteresis, non-repeatability, regulation and thermal effects

² Frequency Response given is for electronics only. Actual Frequency Response will depend on specified pressure range and operating media.

ELECTRICAL SPECIFICATIONS	
Input Voltage	22 to 36 VDC
Input Current	9 mA nominal, 30 mA maximum
Output Signal	0-5 VDC
Electrical Interface	D38999/27YC8PN
Output Impedance	1000 Ω Maximum
Output Noise	15 mV P-P Maximum
Insulation Resistance	100 Meg Ohm @ 50 VDC
Isolation Resistance	100 Meg Ohm @ 50 VDC

- OPTIONS**
- Different Output Signal configurations available (4-20 mA, 0.5-4.5 VDC, etc.)
 - Different connector styles can be accommodated

OPTIONAL DESIGN FEATURES

- Different mounting feet options available
- Platinum RTD outputs: 1000 Ω and 2000 Ω
- EMI/EMC filtering
- Pigtail option available
- Outline specification drawings available upon request

MECHANICAL SPECIFICATIONS	
Operating Media	Gaseous He, O ₂ , N ₂ , H ₂
Pressure Interface	1/4" AN Flared Tube Fittings per AS109E8E04 with lockwire holes
Compensated Temperature Range	-47°F to +162°F
Qualification Random Vibration Level	66.2. grms
Shock Level	2540 G

- OPTIONS**
- Configurable for corrosive media applications. Consult TAVIS Engineering for specific use cases
 - Different fitting options (lockwire holes, etc) available
 - Larger temperature ranges are obtainable (e.g. -65°F to + 235°F)

PRODUCT DIMENSIONS

