

- Pressure Transducer Error (full scale voltage of 0.5 for both):
 - Minimum resolution error
 - Static pressure
 - Full scale pressure: 60 psi
 - Full scale voltage: 0.5V
 - Bits: 12
 - Steps: $2^{\text{Bits}} = 4096$
 - Step size: Steps / Full scale voltage = $1\text{e-}04$
 - Minimum resolution: Slope * Step size = 0.0183 psi
 - Minimum resolution = 0.3947 kPa
 - Stagnation pressure
 - Full scale pressure: 300 psi
 - Full scale voltage: 0.5V
 - Bits: 12
 - Steps: $2^{\text{Bits}} = 4096$
 - Step size: Steps / Full scale voltage = $1\text{e-}04$
 - Minimum resolution: Slope * Step size = 0.0732 psi
 - Minimum resolution = 1.579 kPa
 - Linearity
 - Static: $60 \text{ psi} * 0.0025 = 0.15 \text{ psi}$
 - Stagnation: $300 \text{ psi} * 0.0025 = 0.75 \text{ psi}$
 - Repeatability
 - Static: $60 \text{ psi} * 0.002 = 0.12 \text{ psi}$
 - Stagnation: $300 \text{ psi} * 0.002 = 0.6 \text{ psi}$
 - Temperature Shift
 - Static: $60 \text{ psi} * 0.0075 = 0.45 \text{ psi}$
 - Stagnation: $300 \text{ psi} * 0.0075 = 2.25 \text{ psi}$
 - Null Shift
 - Static: $60 \text{ psi} * 0.005 = 0.3 \text{ psi}$
 - Stagnation: $300 \text{ psi} * 0.005 = 1.5 \text{ psi}$
 - Total
 - $\text{SQRT}(\text{Minimum resolution}^2 + \text{Linearity}^2 + \text{Repeatability}^2 + \text{Temperature Shift}^2 + \text{Null Shift}^2)$

$$u_{\text{RMS}} = \sqrt{u_1^2 + u_2^2 + \dots + u_n^2}$$

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- Static: +/-0.81 psi
- Stagnation: +/-4.06 psi