Application Note

Glossary (Engineering Terms)

• **Total Range**
The largest angle which the sensor or inclinometer can measure.

• **Linear Range**
The maximum angle within the total range, where an angular movement produces an equally proportional change in output.

• **Resolution**
The smallest angular increment at which a detectable change in output can be measured.

• **Repeatability**
The maximum allowable deviation in output when measuring the same input angle several times.

• **Linearity**
The amount of deviation from a straight line, defined by the averaging of measured incremental outputs.

• **Accuracy**
The maximum deviation of the output from the absolute input angle, with all effects (linearity, temperature, repeatability, etc.) considered.

• **Scale Factor (also Slope or Sensitivity)**
The amount of change in the output for a given change in the input angle, normally defined as units/degree.

• **Temperature Coefficient of Null**
The amount of change in the electrical zero output, caused by a change in the ambient temperature.

• **Temperature Coefficient of Scale**
The amount of change in sensitivity (slope), caused by a change in the ambient temperature.

• **Time Constant**
The amount of time it takes, after a stepped angular movement of ½ the linear range, to produce an output equal to 63% of that stepped movement.

• **Cross Axis Error**
The maximum output deviation allowed, when tilting perpendicular to the sensitive axis.

• **Orthogonally**
At a right angle, or perpendicular to.

• **Boresight (error)**
The maximum deviation of the electrical zero (0) output, with the device mounted in the mechanical zero (level) position.

• **Threshold**
The smallest amount of change in the input angle, that will produce a measurable change in the output.

• **Settling Time**
The amount of time for the output to stabilize within 1% of its quiescent value.