

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 $\frac{1}{2}$ 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.



SPECTRON GLASS AND ELECTRONICS INC.

595 OLD WILLETS PATH

HAUPPAUGE NY 11788

PHONE: 631 582-5600

FAX: 631 582-5671

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Doc.# SAN-212-4103