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Company Overview



SmartTool Technologies has been developing and manufacturing innovative, rugged, angle measurement systems for a broad range of applications for over 15 years. A pioneer in the field of electronic angle measurement, the company first began selling its products in 1987. Since that time and owing to the success of its proprietary technology, the company has expanded its product line to a variety

of performance and price combinations. These products are currently sold around the world for use in a broad array of applications. The company's products are currently manufactured at facilities in Oklahoma City, Oklahoma, and Penang, Malaysia.

We pride ourselves on our excellent reputation for high-quality products, on-time deliveries, and personalized service. If you think one of our products may be a good fit for your application or if you have any questions, please feel free to contact us and we'll have a sales representative get in touch with you immediately.

Theory of Operation

The heart of every SmartTool Technologies protractor and OEM inclinometer is an innovative, noncontact capacitive sensor that measures angles with respect to gravity over a full 360° range. The sensor is comprised of a special disk-shaped printed circuit board (PCB) and an aluminum housing which is sealed to form a cylindrical cavity.

The cavity is one-half filled with a special liquid, which causes the capacitive characteristics of the PCB to change as the unit is rotated. By precisely measuring these capacitive characteristics, the exact orientation of the sensor can be determined.



Every SmartTool Technologies protractor and inclinometer is fully calibrated during the manufacturing process, and special algorithms in the microprocessor improve measurement accuracy and compensate for changes in sensor output with temperature.