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Application Story **Electronics**

Hard Disk Drive Measurement using Ultra Feather Touch Probe

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The Product

The Solartron Ultra Feather Touch probe is built for the measurement of delicate surfaces that cannot be marred or scratched. With just 0.03 to 0.06 g of tip force, with spring and pneumatic versions, a UFT provides up to 6 microns of accuracy, with outstanding repeatability and resolution. Both nylon and ruby tips are available. The UFT has been used in the measurement of glass and Semi-Conductor wafers.

Range: 10 mm – Accuracy: Up to 0.06% of reading – Resolution: Up to 0.01 µm – Repeatability: Up to 0.15 µm

The Challenge

Hard Disk Drives for are still the most common storage device for computers and servers. However, market forces are requiring HDD's to be smaller, with higher storage capabilities and razor thin profit margins. Critical dimensions of the casing, which is cast and/or machined, must be checked quickly and efficiently. As with most electronic components, the casing can't be marred during any dimensional check. However, most non-contact sensors can be expensive, bulky, and don't always perform well on a machined surface.

The Solution

Ultra Feather Touch probes can be used as a viable alternative to non-contact. Here, the central area where the motor is mounted must be checked at three points. For this, a laser or other non-contact sensor is too bulky. However, a UFT is just 8mm in diameter, and the light tip force and optional nylon tip will ensure the surface will not be marred. Plus, the cost of three digital probes is less than the price of one high accuracy laser. All three probes can be networked and connected to a PC or PLC via the Solartron Orbit® 3 network.

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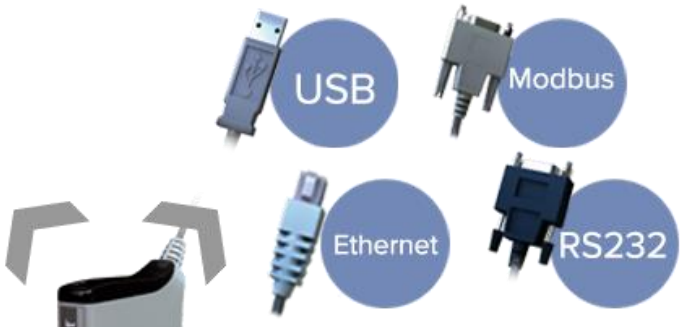
Supports all Solartron Sensors

Interface via USB, RS232, Ethernet and Modbus Output

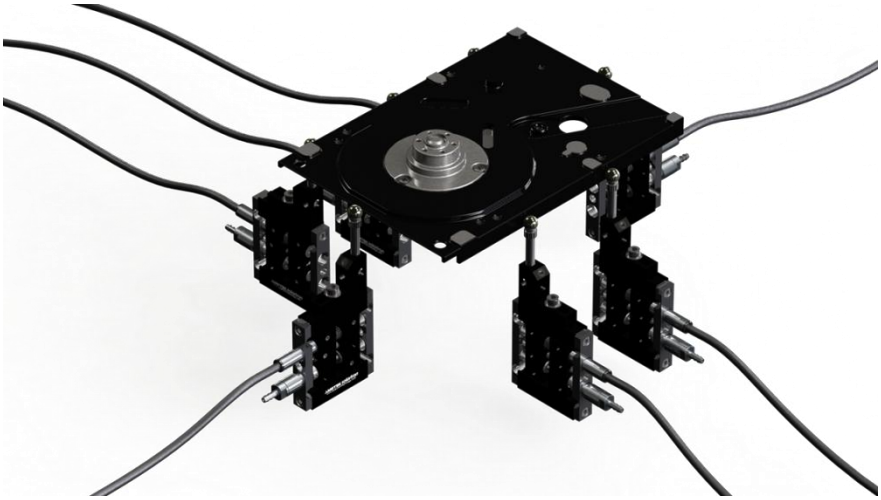


Interface to various sensors and readouts

Up to 150 Sensors

Other Solartron HDD applications

Use Solartron flexures to quickly gauge the perimeter of a HDD casing



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Solartron pursues a policy of continuous development. Specifications in this document may therefore be changed without notice.

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