

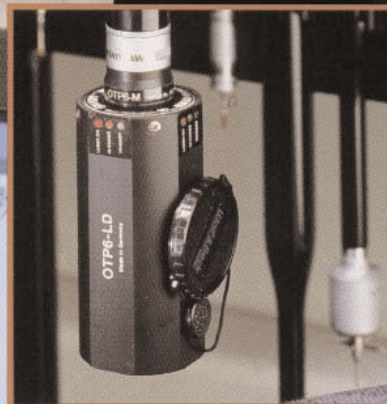
OTP6M - optical trigger probe system



Non-contact inspection
Repeatable z axis measurements



Visible laser spot
Compatible with standard CMM probe software



Interchangeable with standard touch trigger probes
Retrofittable to existing CMMs

A laser inspection system for use
on manual and DCC CMMs

RENISHAW 

THE OTP6M SYSTEM

The OTP6M optical trigger probe system gives users of Co-ordinate Measuring Machines (CMMs) the ability to add a non-contact inspection capability to their machines.

Integration of the system is easy and uses standard CMM software to control the measurement process - all made possible by the new OPI6 interface, which also enables OTP6M to be used with standard touch trigger probes.

APPLICATION

Developed in collaboration with a German supplier of laser measurement technology, the OTP6M laser probe incorporates a Renishaw 'autojoint', enabling fitment to the standard PH6M and PH10M multiwired probe heads. It combines the functions of a conventional contact probe with the advantages of non-contact inspection.

The OTP6M probe uses a visible laser beam which causes no distortion of component surfaces, allowing the inspection of pliable or delicate materials. The system gives repeatable Z-axis measurements and has an edge triggering capability. Typical applications include the measurement of interior parts for automobiles eg. seating and dashboards, plastic mouldings and clay models/prototypes.

When fitted to the PH10M motorised head the OTP6M probe can be automatically orientated in 2 additional axes, allowing most features of a part to be accessed in a single set-up.





OPERATING PRINCIPLE

The OTP6M system operates using the co-axial optical triangulation principle. A Class 2 laser beam is projected onto the component surface and a trigger signal sent to the CMM controller when the laser spot reaches its focal point. The trigger signal emulates that of a standard touch trigger probe, ensuring that the OTP6M can be used with existing CMM software requiring no specialist programming techniques.



EASE OF INTEGRATION

The new OPI6 interface enables the OTP6M laser probe to be easily integrated with standard touch trigger probes, ensuring full compatibility with existing probe installations. The OPI6 also has the capability to integrate with other multi-wired Renishaw probes (eg. SP600M scanning probe), directing probe signals to the relevant interface.* The ability to operate multiple probe sensor applications on a single machine is therefore possible.

*Note: Signals may only be passed to one additional interface unless used in conjunction with an Interface Selector 1 (IS1).

FLEXIBILITY

When used with a multi wired probe extension (PEM) adaptor the OTP6M is compatible with the unique Renishaw Autochange Rack System, a standard option on most automated CMMs. This allows the laser probe to be used with other sensors during a single automated inspection cycle, without the need for operator intervention.

The full benefits of using multiple sensors for maximised inspection efficiency is therefore achievable.

Global solutions from Renishaw

Renishaw is an established world leader in metrology, providing high performance, cost-effective solutions for measurement and increased productivity. A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Renishaw designs, develops and manufactures products which conform to ISO 9001 standards.

Renishaw provides innovative solutions with the following products:

- Probe systems for inspection on CMMs (co-ordinate measuring machines).
- Systems for job set-up, tool setting and inspection on machine tools.
- Scanning and digitising systems.
- Laser and automated ballbar systems for performance measurement and calibration of machines.
- Encoder systems for high accuracy position feedback.
- Spectroscopy systems for non-destructive material analysis in laboratory and process environments.



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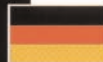
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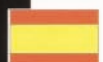
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