

## New ultra-compact radio transmission touch probes bring probing benefits to a wider range of CNC machine tools

**Renishaw adds to its market-leading range of probe and software products with new touch probe systems for machines, including lathes, where line-of-sight issues cause difficulties for optical signal transmission.**

Renishaw is making waves with the introduction of new touch probe systems that use its unique frequency hopping spread spectrum (FHSS) probe signal radio transmission technology to allow automated job set-up and in-process measurement on all sizes of CNC machine tools. The new ultra-compact RMP40 probe is especially suited to multi-axis and mill-turn applications, whilst its variant, the RLP40 touch probe, is specifically designed for more hostile turning environments. A transmission only module RMP40M is also being introduced.



RMP40 ultra-compact radio transmission touch probe

These new products reinforce Renishaw's world leading range of probe systems and probing software, which bring a range of user benefits including reduced set-up times, reduced scrap, reduced fixture costs and improved process control. The range of radio-based inspection probes already includes the multi-award winning RMP60 touch probe, and the class-leading high accuracy RMP600 probe with Renishaw's patented Rengage™ 3D strain gauge technology.

Measuring just 40 mm in diameter and 50 mm long, the RMP40 probe system pairs the compactness of Renishaw's award-winning OMP40 optical transmission probe system with the robustness and versatility of Renishaw's unique FHSS radio transmission. This combination means that the RMP40 is suited for use on all sizes of machine tools, particularly multi-axis and mill-turn applications in which line-of-sight between the inspection probe and its interface cannot always be maintained.

The RMP40's FHSS radio transmission is the same unique yet tried-and-trusted system used by Renishaw's existing RMP60 and RMP600 probes in thousands of applications worldwide. It pairs with the standard Radio Machine Interface (RMI) and utilises the 2.4GHz frequency band, allowing it to be 'worldwide legal' so that machine tool builders and users can specify and operate the same types of probes wherever they are located. It also delivers unrivalled levels of robustness and flexibility through frequency diversity, whereby the probe and its interface continually hop from one transmission channel to another. This eliminates 'dead spots' within the working environment and allows the system to avoid radio interference, both of which are common problems for other fixed-channel and non-hopping radio transmission inspection probes.

Naturally the RMP40 touch probe incorporates Renishaw's patented Trigger Logic™ set-up and mode selection menus. This allows users to quickly and easily configure their probe systems to their own specific requirements, without tricky disassembly routines or changes to tiny switches.

Sharing many features in common with the RMP40 touch probe, the RLP40 is a radio transmission inspection probe system for lathes, whilst the RMP40M is a radio transmission module that incorporates an industry-standard M16 adaptor for use with Renishaw's proven LP2 family of lathe probes.

Although it incorporates all of the key features and benefits of the RMP40, the RLP40 touch probe has been specially packaged to withstand the extreme environments more typical of lathes and turning centres. Like all Renishaw probes it is sealed to IPX8, but is further protected by a user-serviceable eyelid that prevents high velocity swarf and chips from causing damage.

The RMP40M module also gives all the benefits of the RMP40 system, allowing the flexibility of its FHSS radio transmission system to be applied to those situations in which the LP2 family of touch probes, adaptors and options are necessary.

With a combined package of user-friendly operation, robustness, extreme flexibility and proven reliability, both the RMP40 and RLP40 probe systems are highly desirable and versatile additions to Renishaw's ever-growing family of inspection probes, and can be retrofitted to existing installations. Importantly for user confidence they are also backed by a trusted worldwide network of service, support and applications expertise.

Renishaw's range of tool setting probes, inspection probes and probe software caters for the complete cross-section of machine tool probing applications, from the setting of tools and workpieces through to process control and complex On-Machine Verification tasks, whether on simple milling machine or a complex multi-axis machine tool.

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