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RMP24-micro radio machine probe



Specification

Principal application	Workpiece inspection and job set-up on small machining centres and multi-tasking machines	
Dimensions	Length Diameter	31.4 mm (1.24 in) 24 mm (0.94 in)
Weight (without shank)	With batteries Without batteries	36.5 g (1.28 oz) 32.5 g (1.14 oz)
Transmission type	Frequency hopping spread spectrum (FHSS) radio	
Radio frequency	2400 MHz to 2483.5 MHz	
Switch-on / Switch-off options	Radio on → Radio off	
Typical battery life **2 × CR1632 lithium manganese dioxide (Li/MnO2)**	Standby life	5.0 months
	Continuous life	228 hours
Spindle speed (maximum)	1000 r/min	
Recommended styli	Steel, lengths 10 mm (0.39 in) to 30 mm (1.18 in)	
Operating range	Up to 5 m (16.4 ft)	
Receiver/interface	RMI-QE combined antenna, interface and receiver unit	
Sense directions	Omni-directional ±X, ±Y, +Z	
Unidirectional repeatability	0.35 µm (14 µin) 2σ [1]	
Stylus trigger force [2 3] XY low force XY high force Z	 0.08 N, 8.2 gf (0.29 ozf) 0.14 N, 14.3 gf (0.50 ozf) 0.75 N, 76.5 gf (2.70 ozf)	
Stylus overtravel	XY plane +Z plane	±14° 4 mm (0.16 in)
Environment [4]	IP rating	IPX8, BS EN 60529:1992+A2:2013
	IK rating	IK02 BS EN IEC 62262: 2002
	Storage temperature	–25 °C to +70 °C (–13 °F to +158 °F)
	Operating temperature	+5 °C to +55 °C (+41 °F to +131 °F)
	Indoor/outdoor use	Indoor use
	Altitude	≤3000 m
	Relative humidity	5% to 95%
	Wet location	Yes, water/oil/coolant
	Pollution degree	Level 2

1 Performance specification is tested at a standard test velocity of 480 mm/min (18.89 in/min) with a 10 mm stylus. For best performance probing feedrates of up to 100 mm/min (3.94 in/min) and back-off feed of greater than 1000 mm/min (39.34 in/min) are recommended.

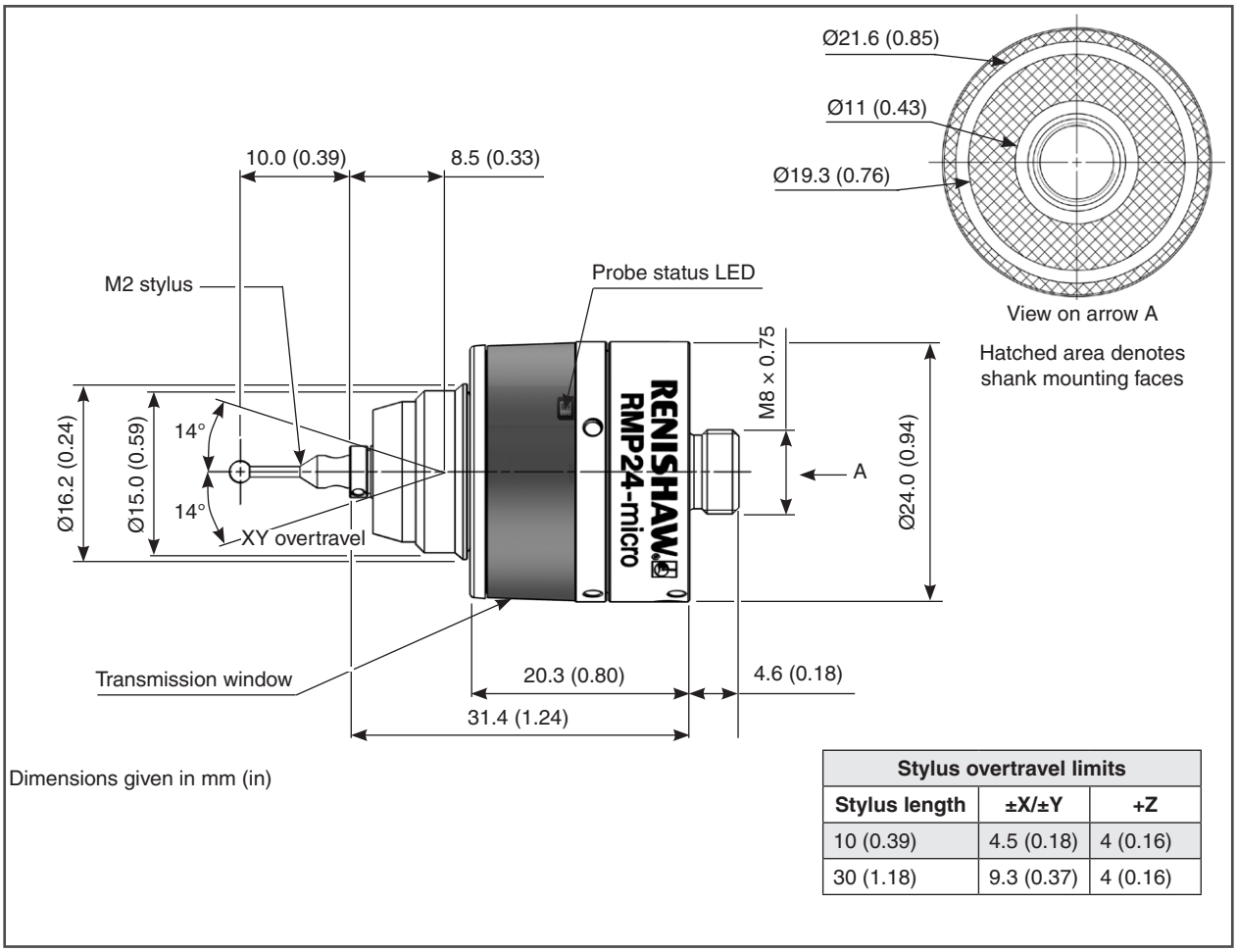
2 Trigger force, which is critical in some applications, is the force exerted on the component by the stylus when the probe triggers. The maximum force applied will occur after the trigger point (overtravel). The force value depends on related variables including measuring speed, machine deceleration and system latency.

3 These are the factory settings; manual adjustment is not possible.

4 With the battery cap removed the sealing rating is not applicable.

For further information and the best possible application and performance support, contact Renishaw or visit **www.renishaw.com/rmp24-micro**

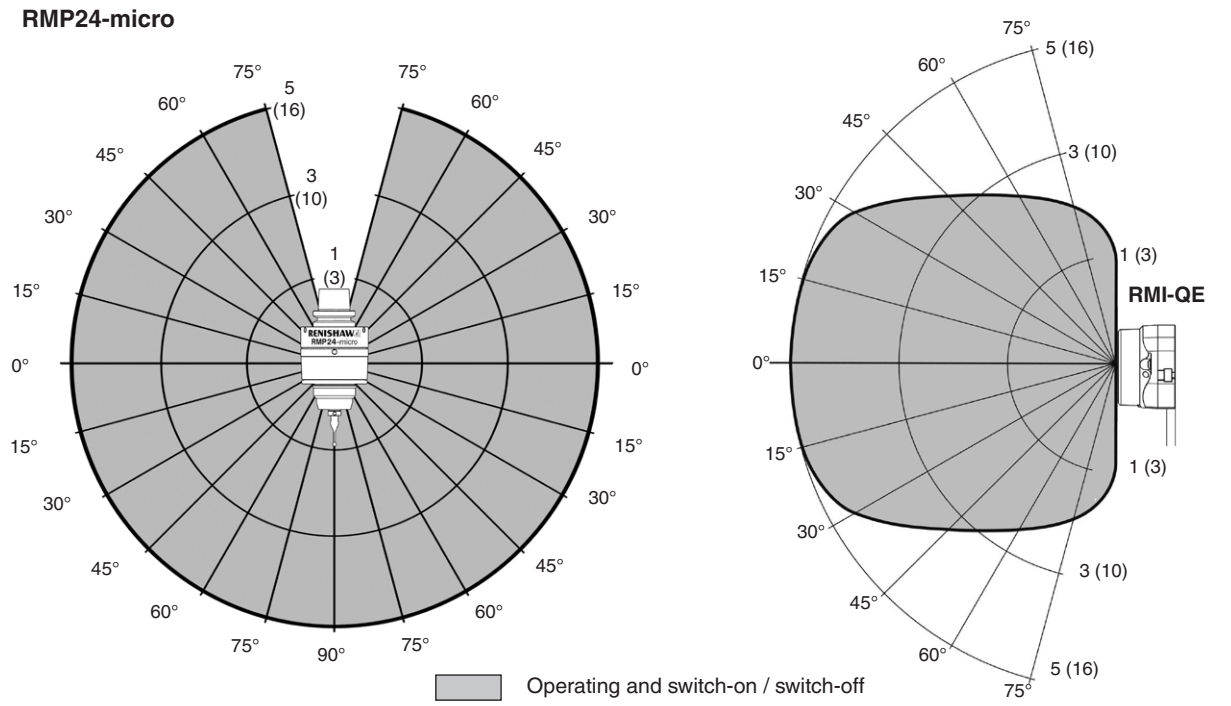
RMP24-micro dimensions



Dimensions given in mm (in)

Stylus overtravel limits		
Stylus length	**±X/±Y**	**+Z**
10 (0.39)	4.5 (0.18)	4 (0.16)
30 (1.18)	9.3 (0.37)	4 (0.16)

RMP24-micro performance envelope



Typical plot at +20 °C (+68 °F)
Transmission range in m (ft)

Spare parts and accessories

A full range of spare parts and accessories is available. Contact Renishaw for a full list.

www.renishaw.com/rmp24-micro

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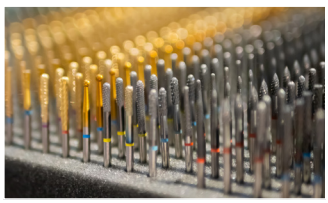
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RMP24-micro: The world's smallest wireless probe for machine tools

Renishaw's miniature radio probe, measuring just 24 mm in diameter and 31 mm in length, provides fast, accurate and reliable part set-up and verification in a package that fits in the palm of your hand.





Features and benefits

- Miniature design - Ideally suited to compact machines manufacturing high-value, high-precision parts found in medical, watchmaking and micro-mechanics industries.
- Highly repeatable - High-precision components with tight tolerances can be measured with exceptional repeatability.
- Ultra-low trigger force - Helps eliminate surface and form damage when inspecting soft metal components.

www.renishaw.com/rmp24-micro

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Next generation radio transmission

RMP24-micro is our latest QE series probing system and communicates with the machine controller via the ultra-compact RMI-QE radio interface. It uses an updated version of our industry-proven frequency hopping spread spectrum (FHSS) transmission technology and operates within the globally recognised 2.4 GHz frequency band. This agile protocol provides robust and reliable communication in busy radio environments and is compliant with radio regulations in all major markets.



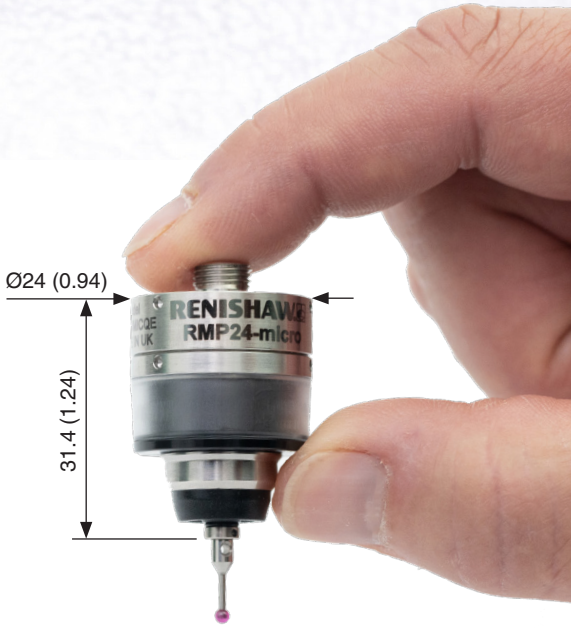
What is frequency hopping spread spectrum (FHSS) radio transmission technology?

FHSS technology enables both the probe and interface to jump from channel-to-channel whilst maintaining communication. This allows our systems to work and co-exist alongside other probes as well as other radio sources such as Wi-Fi, Bluetooth® and microwave ovens as and when they enter the same environment.

Technical highlights

Unidirectional repeatability Maximum 2σ value in any direction	0.35 µm (14 µin) 2σ *
Transmission type	Frequency hopping spread spectrum (FHSS) radio
Receiver/interface	RMI-QE combined antenna, interface and receiver unit
Stylus trigger force XY low force XY high force Z	 0.08 N, 8.2 gf (0.29 ozf) 0.14 N, 16.3 gf (0.58 ozf) 0.75 N, 76.5 gf (2.70 ozf)
Recommended styli	Steel, lengths 10 mm (0.39 in) to 30 mm (1.18 in)

* Performance specification is tested at a standard test velocity of 480 mm/min (18.89 in/min) with a 10 mm stylus. Significantly higher velocity is possible depending on application requirements.



Dimensions given in mm (in)

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