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# RTS (QE) radio tool setter

## Specification

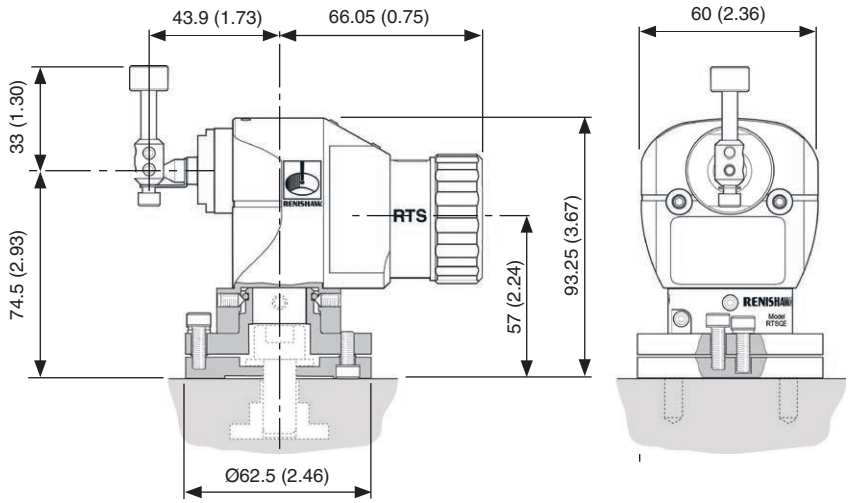
| | | | |
|---|---|---|---|
| **Principal application** | | Tool measuring and broken tool detection on vertical and horizontal machining centres and gantry machining centres. | |
| **Weight with disc stylus** (including batteries) | | 870 g (30.69 oz) | |
| **Transmission type** | | Frequency-hopping spread spectrum (FHSS) radio<br>Radio frequency 2400 MHz to 2483.5 MHz | |
| **Radio approval regions** | | UK, EU, EFTA, Japan and USA (China exempt).<br>For details about other regions, contact Renishaw. | |
| **Compatible interfaces** | | RMI-Q or RMI-QE combined interface and receiver unit. | |
| **Operating range** | | Up to 15 m (49.2 ft) | |
| **Recommended styli** | | Disc stylus (tungsten carbide, 75 Rockwell C) or<br>Square tip stylus (ceramic tip, 75 Rockwell C) | |
| **Switch-on / switch-off options** | | Radio on → Radio off | |
| **Battery life** (2 × AA 3.6 V lithium-thionyl chloride) | Standby life | 99 months maximum. | |
| | Continuous life | 4860 hours maximum. | |
| **Sense directions** | | ±X, ±Y, +Z | |
| **Unidirectional repeatability** | | 1.00 µm (40 µin) 2σ [1] | |
| **Stylus trigger force** [2] [3] | | 1.3 N to 2.4 N, 133 gf to 245 gf (4.7 ozf to 8.6 ozf) depending on the sense direction. | |
| **Stylus overtravel** | | XY plane<br>+Z plane | ±3.5 mm (0.14 in)<br>6 mm (0.24 in) |
| **Mounting** | | M10 / M12 T bolt (not supplied)<br>Optional SPIROL® pins to allow accurate remounting. | |
| **Environment** | | IP rating | IPX8, BS EN 60529:1992+A2:2013<br>(IEC 60529:1989+A1:1999+A2:2013) |
| | | IK rating | IK01, BS EN 62262:2002+A1:2021<br>[for glass window] |
| | | 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 (18.9 in/min) with a 35 mm stylus. Significantly higher velocity is possible depending on application requirements.

[2] Trigger force, which is critical in some applications, is the force exerted on the stylus by the tool 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.

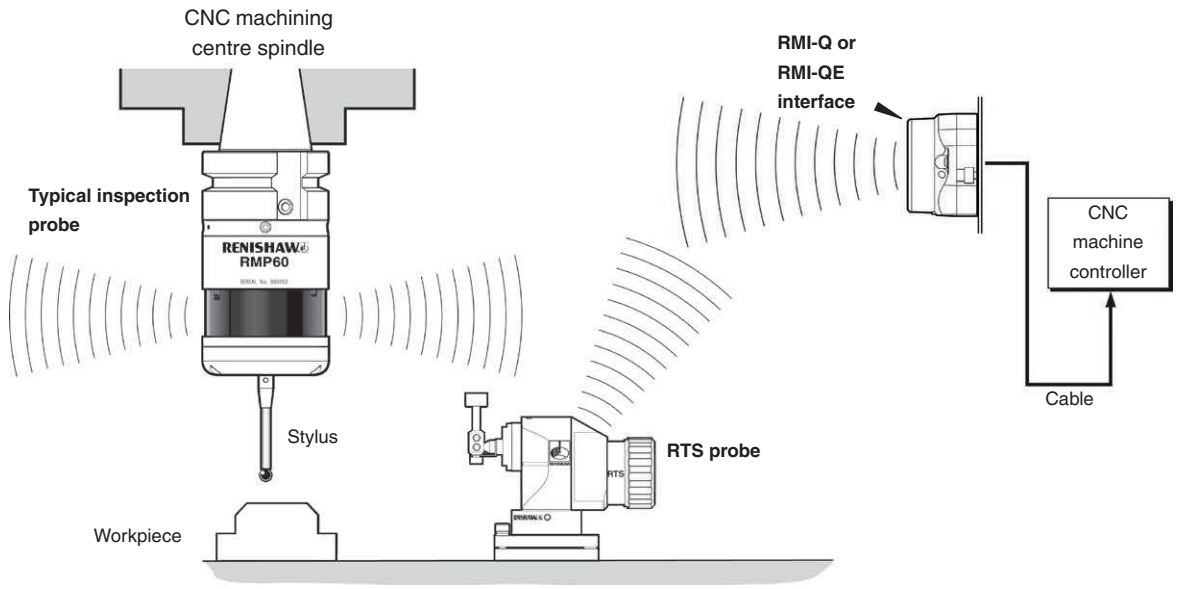
## RTS dimensions




| Stylus overtravel limits | |
|---|---|
| **±X/±Y** | **+Z** |
| ±3.5 (0.14) | 6 (0.24) |

Dimensions given in mm (in)

## Installing the RTS with a RMI-Q or RMI-QE



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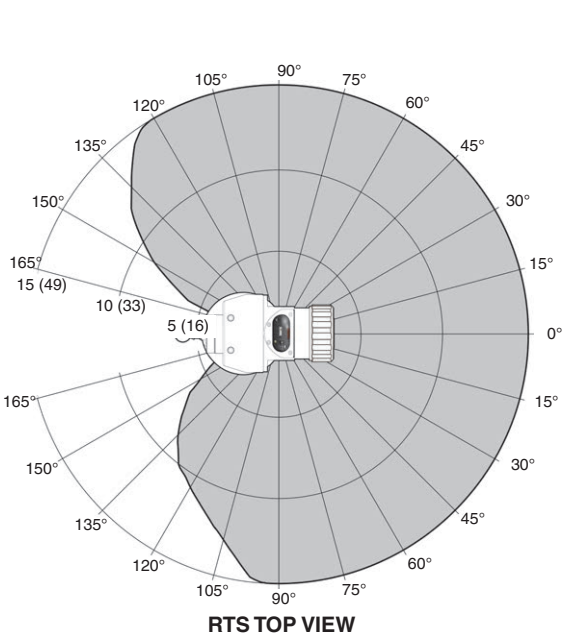
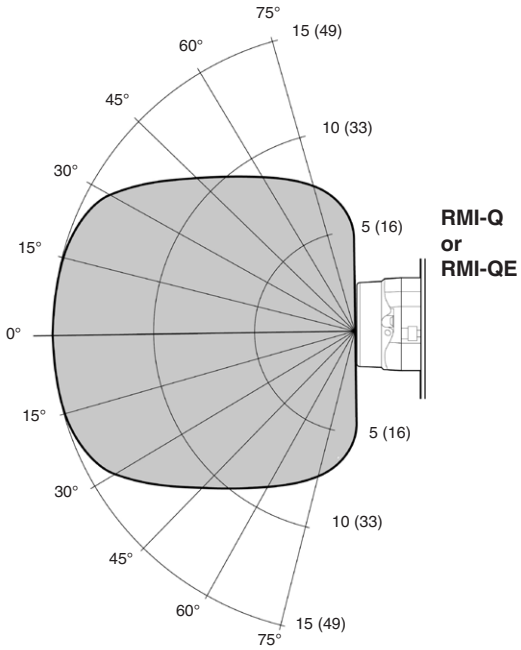
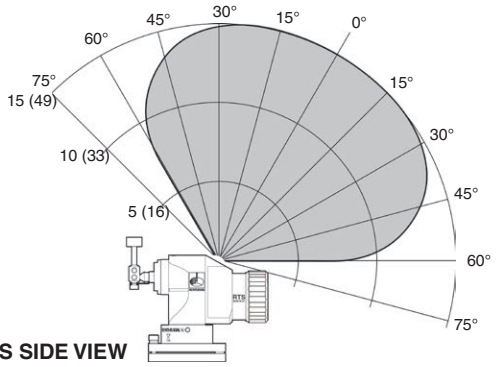
## RTS performance envelope




RTS TOP VIEW




RMI-Q
or
RMI-QE




RTS SIDE VIEW

Operating and switch-on / switch-off

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/rts**

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Part no.: H-6589-8200-01-B
Issued: 04.2025