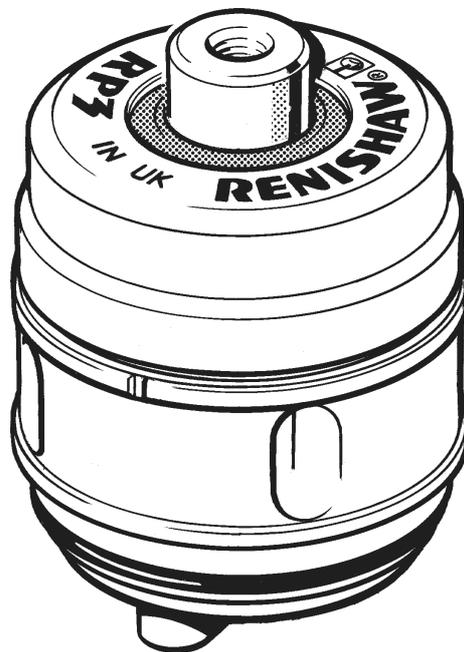


RP3 tool setting probe



The RP3 probe is suitable for OEM installation into purpose built holders, or for use with Renishaw's range of tool setting arms. It features a unique mounting design to ensure correct orientation during installation.

Where the RP3 probe is to be fitted to a probe holder not manufactured by Renishaw, a special OEM kit is available which includes a probe connection printed circuit board.

The RP3 probe has been designed primarily for tool setting applications but can also be used for workpiece setup.

The probe is extremely compact, resulting in significant advantages in tool setting applications, and has the performance of traditional Renishaw touch trigger probes.

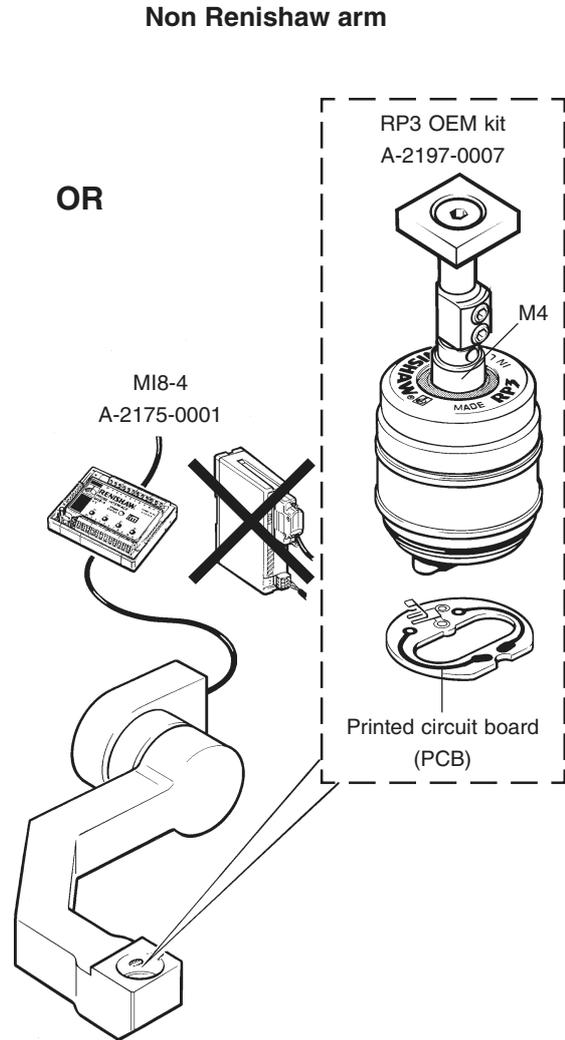
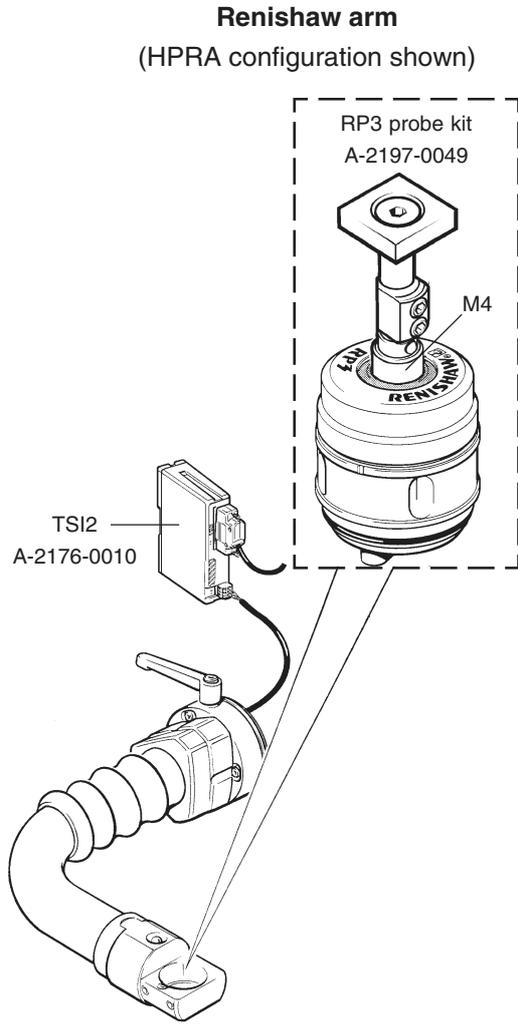
The RP3 utilises a universal M4 stylus mounting allowing the full range of Renishaw styli to be used.

The RP3 should be used in conjunction with any Renishaw tool setting interface.



CAUTION: Any Renishaw arm system that incorporates an LED in the probe holder must be used in conjunction with a Renishaw interface. The system will not operate with any other interface.

RP3 system kit



NOTE: Check that the RP3 is pressed fully into the probe holder so that the spring pins make electrical contact.

Specification

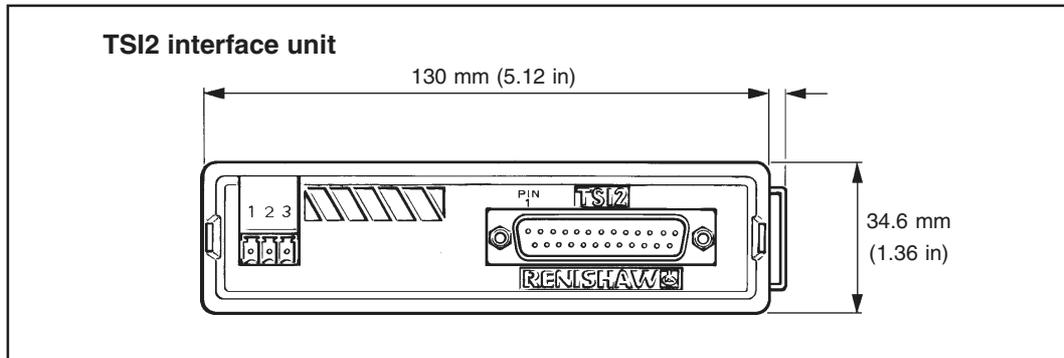
| | | | |
|--|---|------------------------------|---|
| Application | Tool setting | Stylus trigger force | XY 3.5 N (350 gf/12.3 ozf) max in high force direction |
| Sense directions | 5-way * | | Z 12 N (1200 gf/42.3 ozf) max |
| Moisture protection class | IPX8 | Operating temperature | 5 °C to 60 °C (41 °F to 140 °F) |
| Repeatability of trigger points | 1 µm 2σ (with a 35 mm (1.38 in) stylus at 480 mm/min) | Storage temperature | -10 °C to 70 °C (14 °F to 158 °F) |
| Stylus overtravel | X 9 ° | | |
| | Y 9 ° | | |
| | Z 2 mm (0.08 in) | | |

* Where the RP3 is to be used in its 'Z' axis (i.e. in the lathe 'Y' axis), then a five-faced stylus is available to order from the Styli and Custom Products Division in the UK.

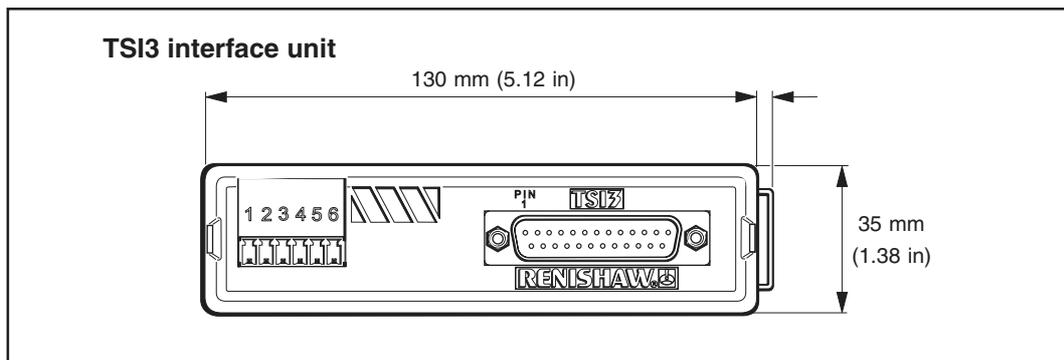
Interfaces

One of three types of interface must be used in conjunction with the RP3 probe kit:

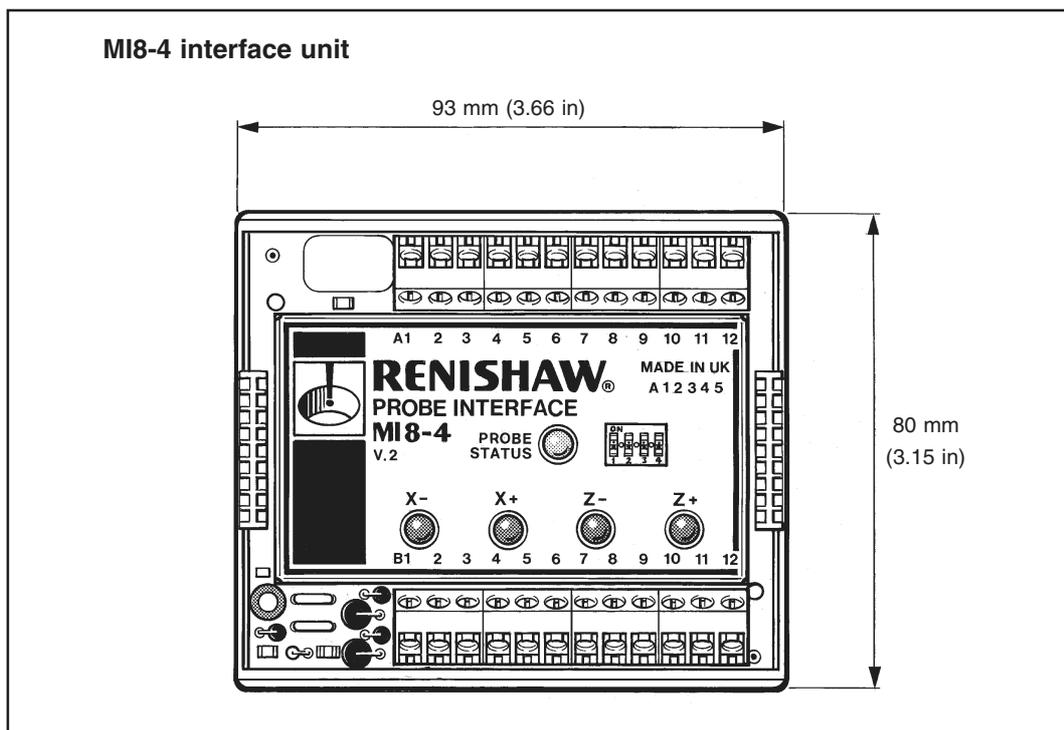
1. A TSI2 interface unit **must** be used with the Renishaw HPRA or HPPA.



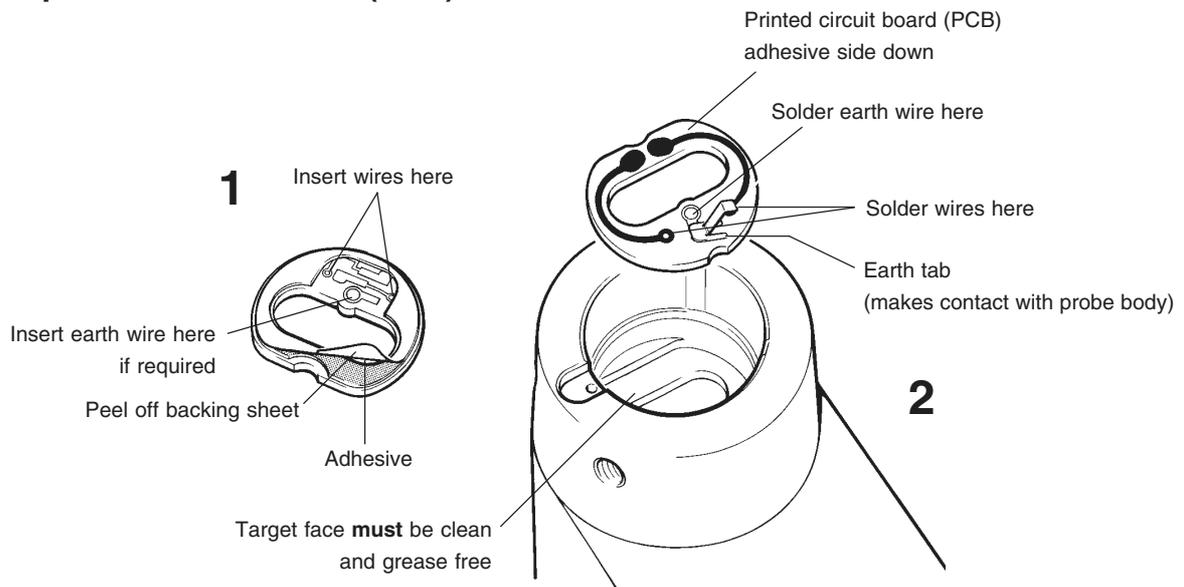
2. A TSI3 interface unit **must** be used with the Renishaw HPMA.



3. An MI8-4 interface unit **must** be used with any other type of arm.



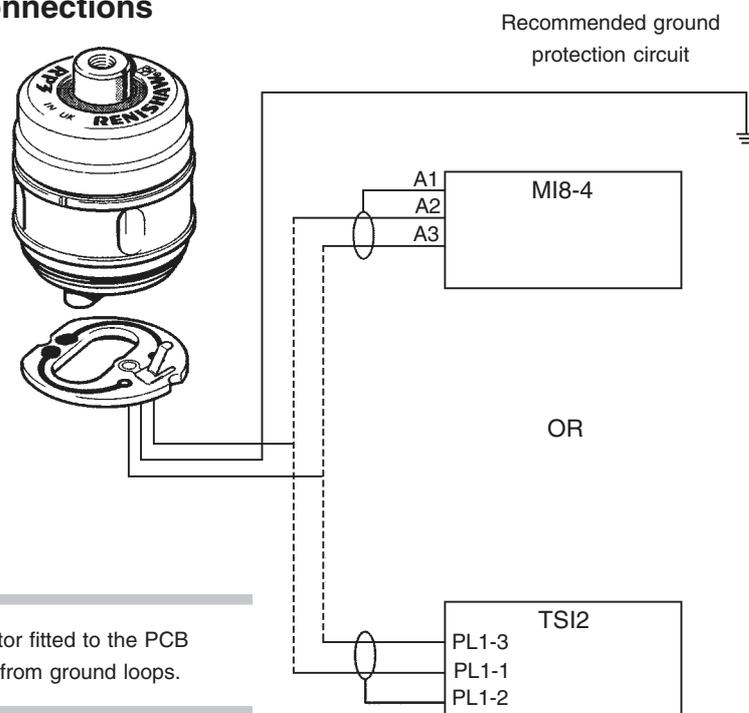
RP3 printed circuit board (PCB) installation



CAUTION: Earthing

Where the RP3 is to be installed into a non-Renishaw manufactured holder, the builder must ensure that the probe body is suitably grounded. All exposed wire connections must also be suitably screened.

Electrical connections



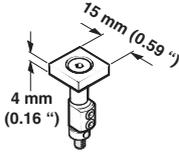
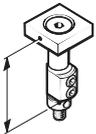
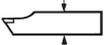
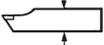
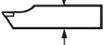
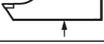
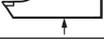
NOTE: The capacitor fitted to the PCB provides protection from ground loops.

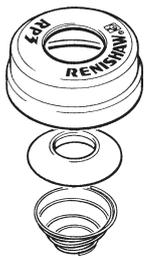


CAUTION: Sealing

Where the RP3 is to be installed into a non-Renishaw manufactured holder, the builder must ensure that the electrical connections and PCB are sealed.

Part numbers

| | | |
|---|---|---|
| Recommended for: |  |  |
|  16 mm | A-2197-0157 | 14.2 mm (0.56 ") |
|  20 mm | A-2197-0158 | 19.5 mm (0.77 ") |
|  25 mm | A-2197-0159 | 29.5 mm (1.16 ") |
|  32 mm | A-2197-0160 | 34.5 mm (1.36 ") |
|  40 mm | A-2197-0161 | 39.5 mm (1.55 ") |
|  50 mm | A-2197-0162 | 49.5 mm (1.95 ") |

| | | |
|---|--|--|
|  A-2197-0006 |  M-2197-0150 |  M-2197-0156 |
|---|--|--|

Associated publications

| | | | | | |
|-----------------------------|-------------|-----------------|-------------|-------------------|-------------|
| MI8-4 Data sheet | H-2000-2185 | HPPA Data sheet | H-2000-2032 | HPPA User's guide | H-2000-5186 |
| RP3 User's guide | H-2000-5187 | HPRA Data sheet | H-2000-2029 | HPRA User's guide | H-2000-5124 |
| Machine tool styli brochure | H-1000-3200 | HPMA Data sheet | H-2000-2037 | HPMA User's guide | H-2000-5141 |

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