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# OMP60 optical machine probe


## Specification

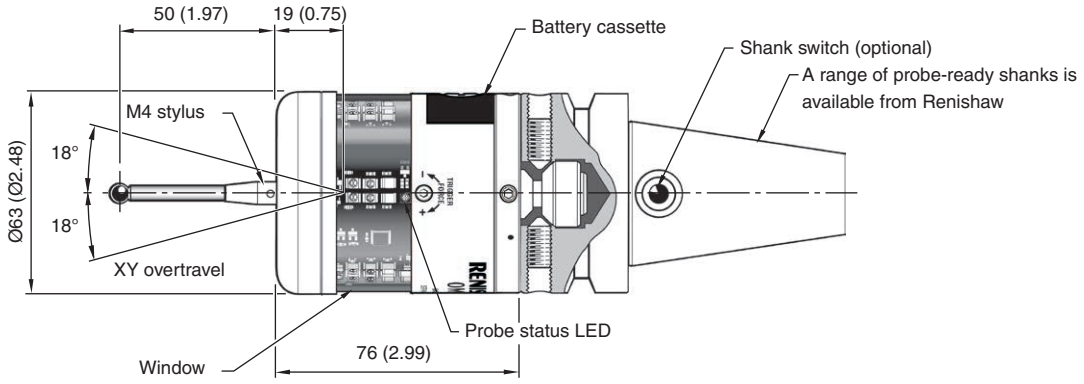
| Optical setting | | Modulated | Legacy |
|---|---|---|---|
| **Principal application** | | Workpiece inspection and job set-up on all sizes of machining centres and small to medium multi-tasking machines. | |
| **Transmission type** | | 360° infrared optical transmission (modulated or legacy) | |
| **Compatible interfaces** | | OMI-2, OMI-2T, OMI-2H, OMI-2C or OSI/OMM-2 | OMI or OMM/MI 12 |
| **Operating range** | | Up to 6 m (19.7 ft) | |
| **Recommended styli** | | Ceramic, lengths 50 mm (1.97 in) to 150 mm (5.91 in) | |
| **Weight without shank** (including batteries) | | 885 g (31.22 oz) | |
| **Switch-on/switch-off options** | | Optical on → | Optical off or timer off |
| | | Spin on → | Spin off or timer off |
| | | Shank switch on → | Shank switch off |
| **Battery life** (2 × AA 3.6 V lithium-thionyl chloride) | **Standby life** | 1767 days maximum, dependent on switch-on/switch-off option. | |
| | **Continuous use low power** | 690 hours maximum, dependent on switch-on/switch-off option. | 880 hours maximum, dependent on switch-on/switch-off option. |
| **Sense directions** | | ±X, ±Y, +Z | |
| **Unidirectional repeatability** | | 1.00 µm (40 µin) 2σ *(see note 1)* | |
| **Stylus trigger force** *(see notes 2 and 3)* | | | |
| XY low force | | 0.75 N, 76 gf (2.70 ozf) | |
| XY high force | | 1.40 N, 143 gf (5.04 ozf) | |
| +Z direction | | 5.30 N, 540 gf (19.06 ozf) | |
| **Sealing** | | IPX8 (EN/IEC 60529) | |
| **Operating temperature** | | +5 °C to +55 °C (+41 °F to +131 °F) | |

Note 1 Performance specification is tested at a standard test velocity of 480 mm/min (18.9 in/min) with a 50 mm stylus. Significantly higher velocity is possible depending on application requirements.

Note 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 and machine deceleration.

Note 3 These are the factory settings, manual adjustment is possible. For more details, please refer to the *OMP60 installation guide* (Renishaw part no. H-4038-8505).

## OMP60 dimensions




| Stylus overtravel limits | | |
|---|---|---|
| **Stylus length** | **±X/±Y** | **+Z** |
| 50 (1.97) | 21 (0.82) | 11 (0.43) |
| 100 (3.94) | 37 (01.45) | 11 (0.43) |

Dimensions given in mm (in)

## OMP60 performance envelope

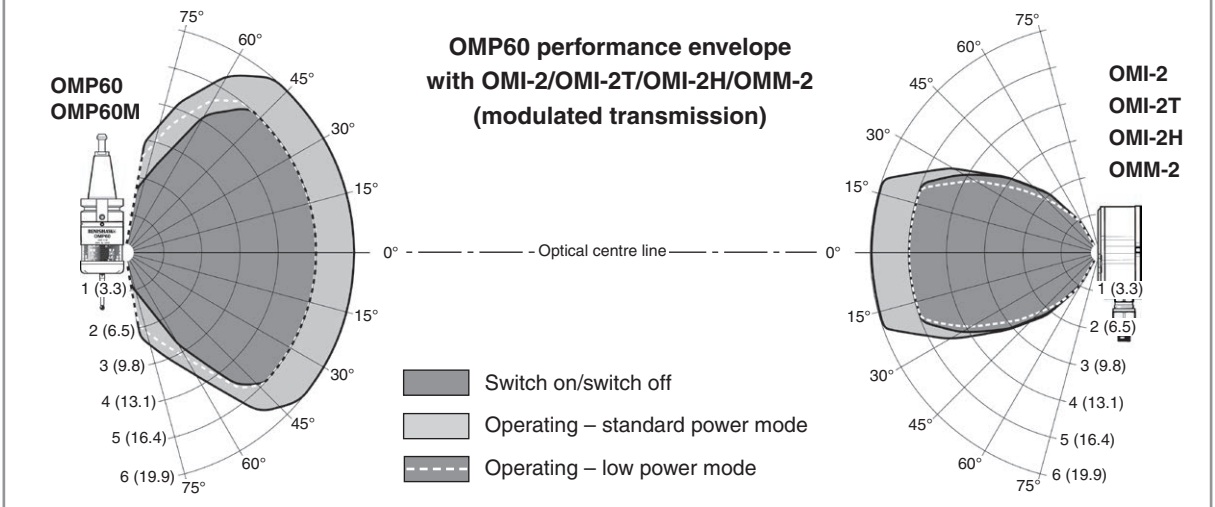
The OMP60 has a 360° transmission envelope over the ranges shown below.

The probe system should be positioned so that the optimum range is maintained over the full travel of the machine axes.

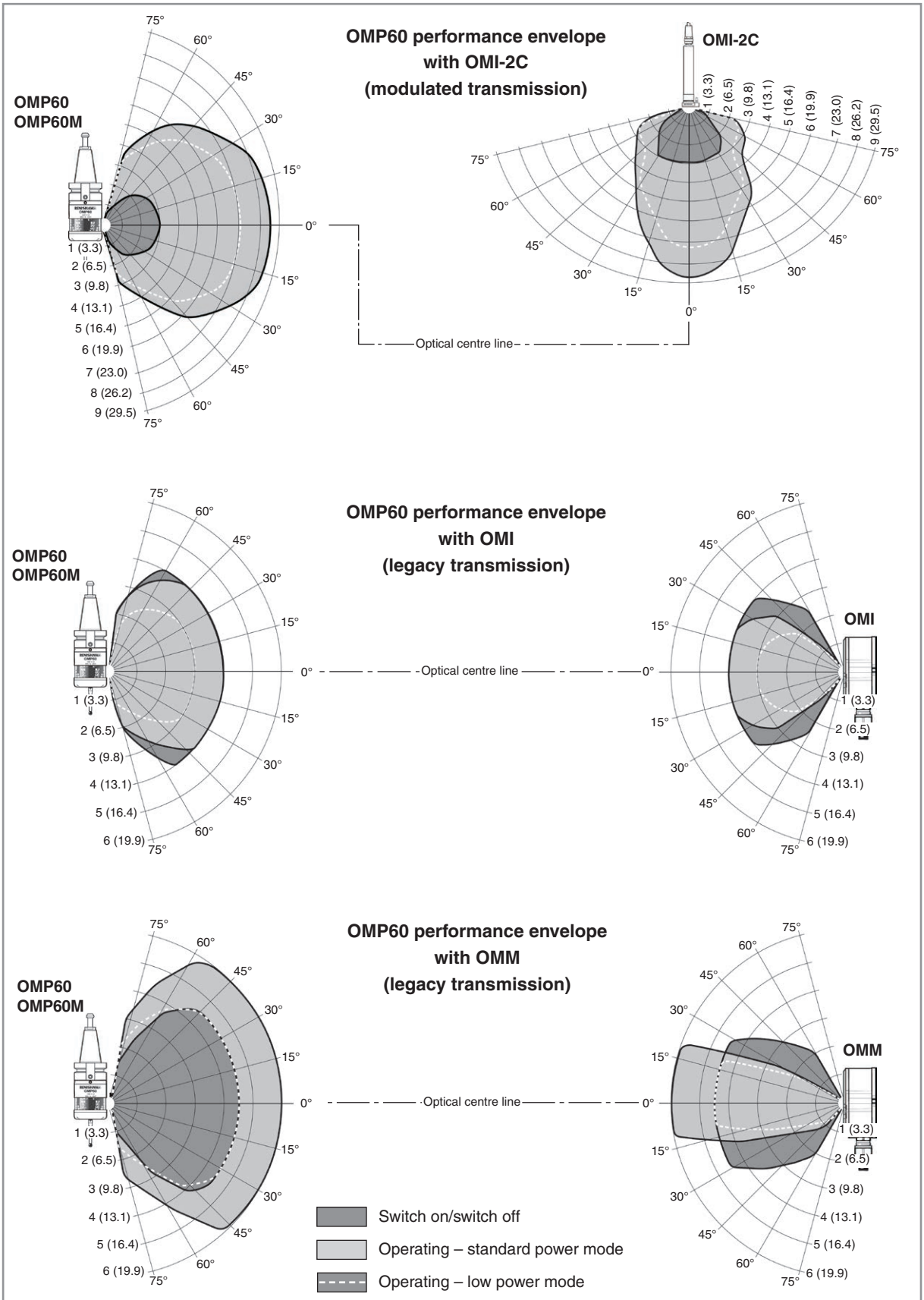
The OMP60 and optical receivers may deviate from the optical centre line, provided opposing light cones always overlap, with transmitters and receivers in the other's field of view (line of sight).

Natural reflective surfaces within the machine may improve the signal transmission range.

Coolant residue accumulating on the receiver will have a detrimental effect on transmission performance. Wipe clean as often as is necessary to maintain unrestricted transmission.




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




Typical plot at +20 °C (+68 °F)

Transmission range in m (ft)

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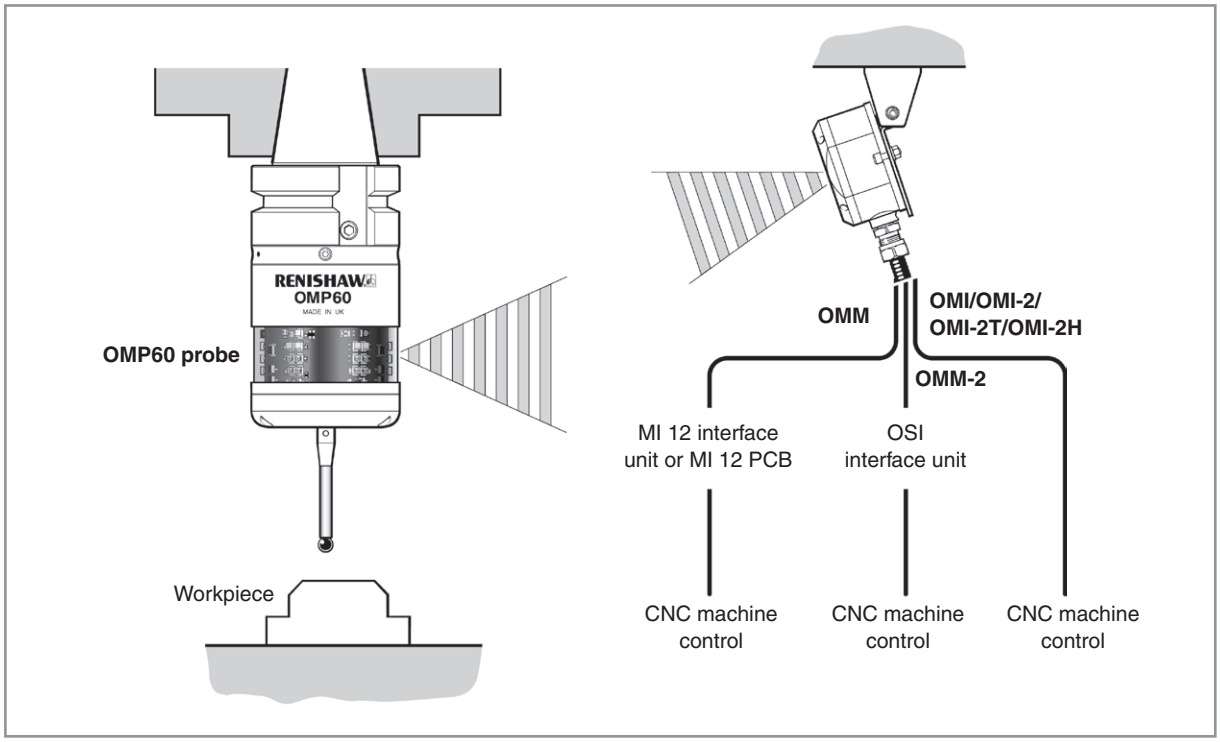
## Typical optical probe system




## Spare parts and accessories

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



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