

# OMP40-2

## optical machine probe



### Specification

Optical setting		Modulated	Legacy
<b>Principal application</b>		Workpiece inspection and job set-up on small to medium machining centres and small multi-tasking machines.	
<b>Transmission type</b>		360° infrared optical transmission (modulated or legacy)	
<b>Compatible interfaces</b>		OMI-2, OMI-2T, OMI-2H, OMI-2C or OSI/OMM-2	OMI or OMM/MI 12
<b>Operating range</b>		Up to 5 m (16.4 ft)	
<b>Recommended styli</b>		Ceramic, lengths 50 mm (1.97 in) to 150 mm (5.91 in)	
<b>Weight without shank</b> (including batteries)		250 g (8.82 oz)	
<b>Switch-on/switch-off options</b>		Optical on →	Optical off
		Optical on →	Timer off
<b>Battery life</b> (2 × ½ AA 3.6 V lithium-thionyl chloride)	<b>Standby life</b>	250 days maximum, dependent on switch-on/switch-off option.	
	<b>Continuous use</b>	230 hours maximum, dependent on switch-on/switch-off option.	270 hours maximum, dependent on switch-on/switch-off option.
<b>Sense directions</b>		±X, ±Y, +Z	
<b>Unidirectional repeatability</b>		1.00 µm (40 µin) 2σ (see note 1)	
<b>Stylus trigger force</b> (see notes 2 and 3)			
XY low force		0.50 N, 51 gf (1.80 ozf)	
XY high force		0.90 N, 92 gf (3.24 ozf)	
+Z direction		5.85 N, 597 gf (21.04 ozf)	
<b>Sealing</b>		IPX8 (EN/IEC 60529)	
<b>Operating temperature</b>		+5 °C to +55 °C (+41 °F to +131 °F)	

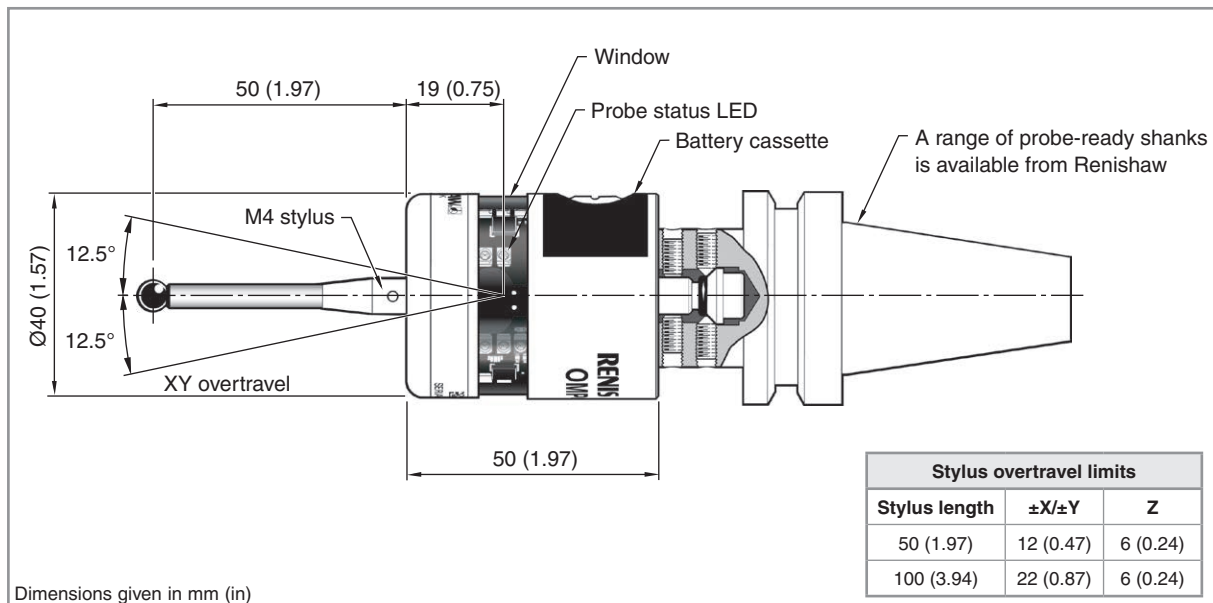
Note 1 Performance specification is tested at a standard test velocity of 480 mm/min (18.9 in/min) with a 50 mm stylus. Significantly higher velocity is possible depending on application requirements.

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 not possible.

For further information and the best possible application and performance support please contact Renishaw or visit [www.renishaw.com/omp40-2](http://www.renishaw.com/omp40-2)

## OMP40-2 dimensions



## OMP40-2 performance envelope

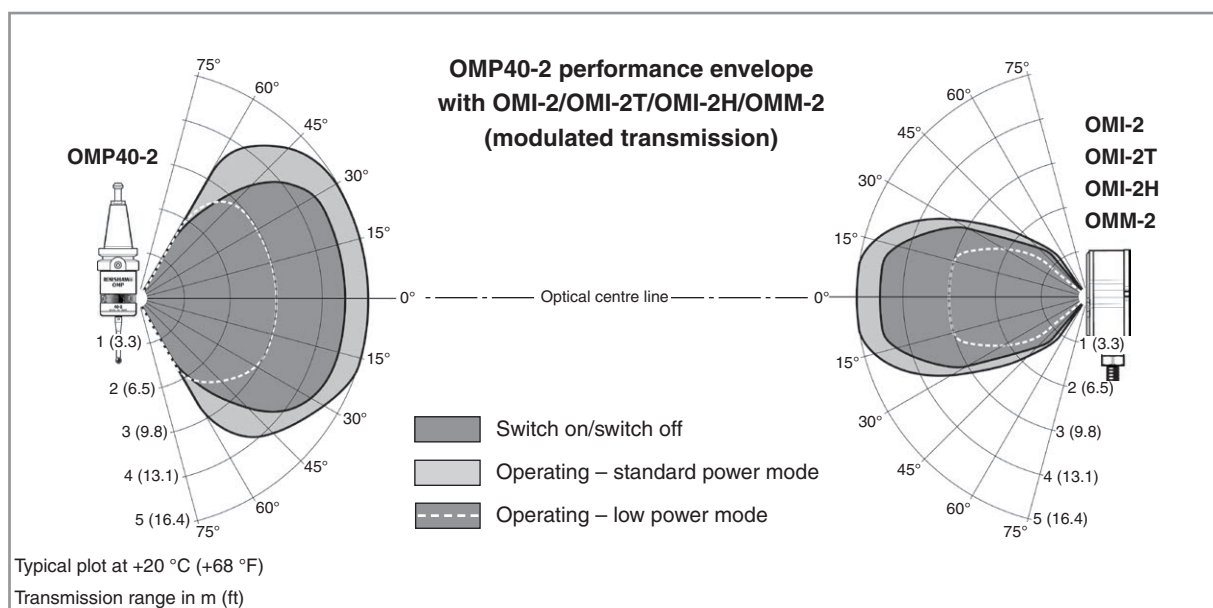
The OMP40-2 has a 360° transmission envelope over the ranges shown below.

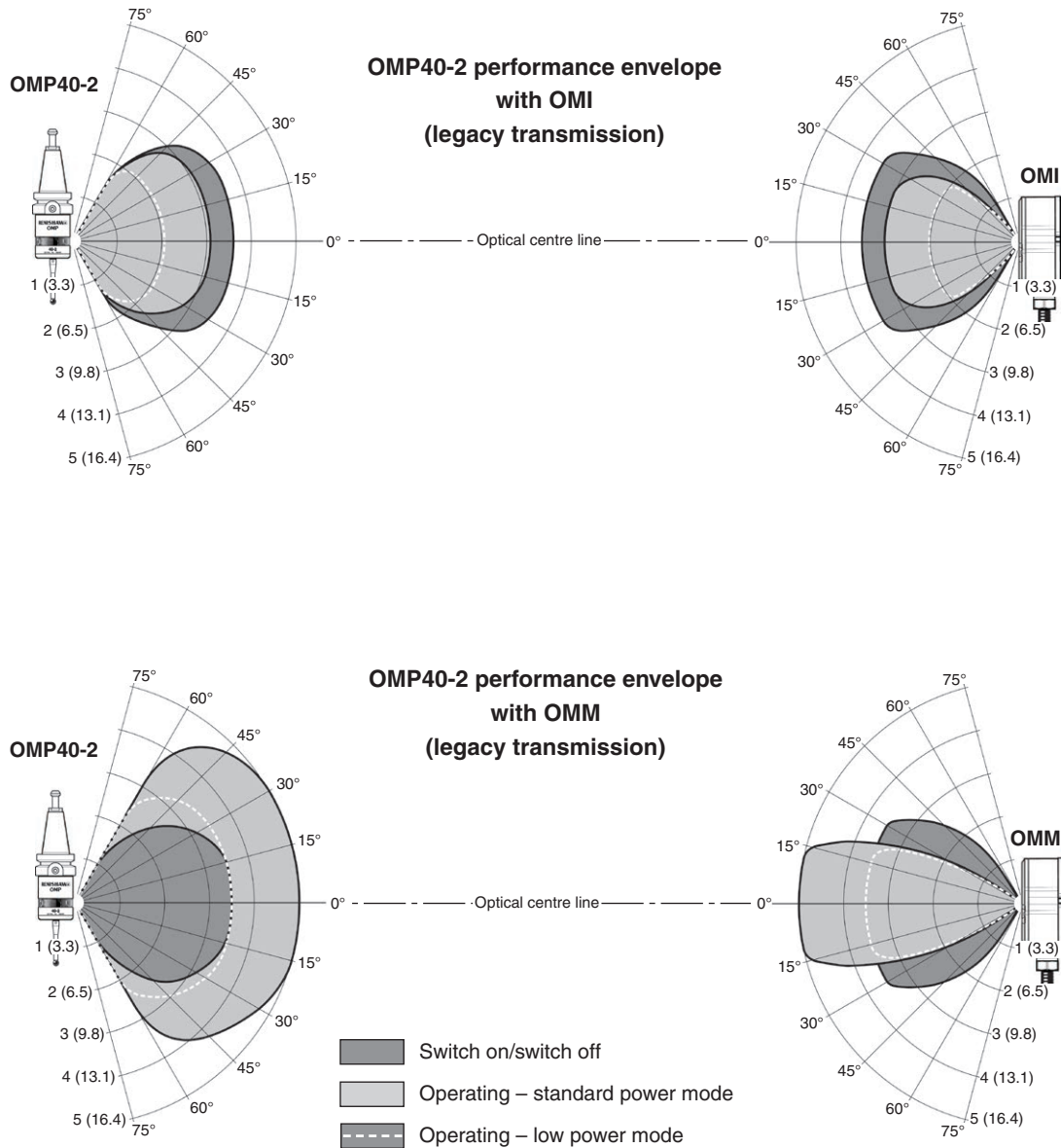
The probe system should be positioned so that the optimum range can be achieved over the full travel of the machine axis.

The OMP40-2 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 affect 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.

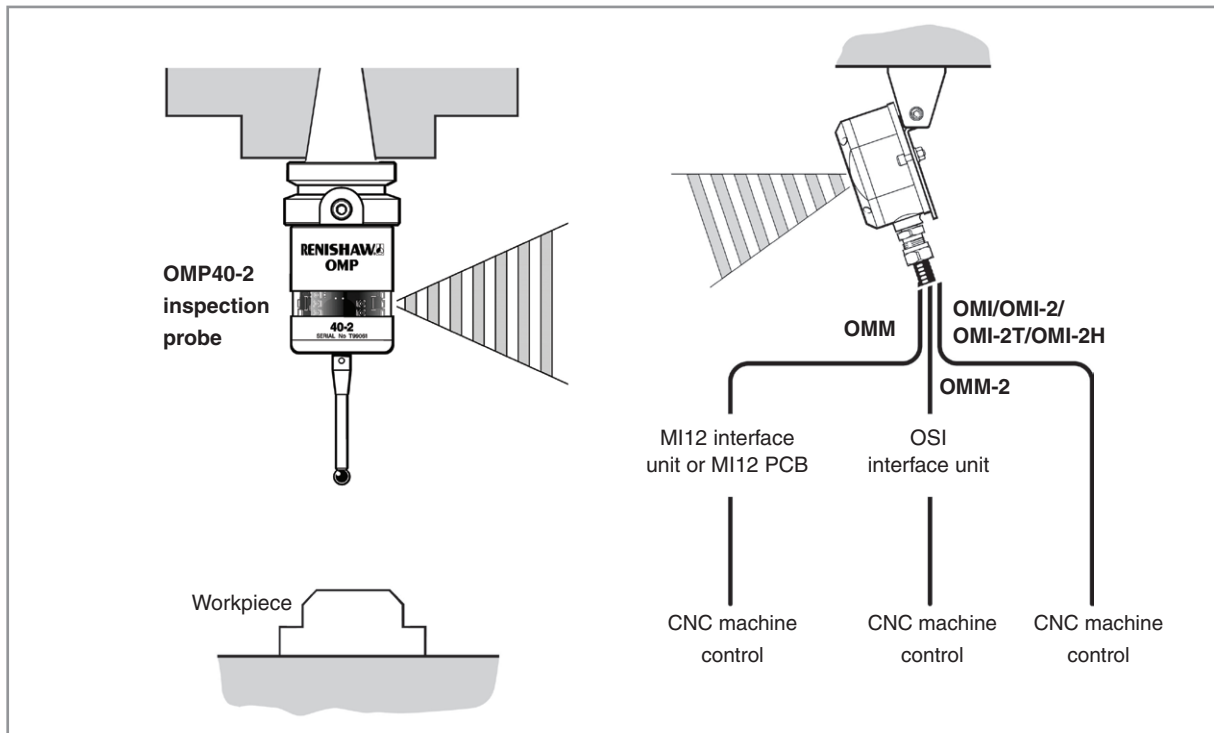




Typical plot at +20 °C (+68 °F)

Transmission range in m (ft)

## Typical optical probe system



## Spare parts and accessories

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

