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Comparison of probes MP12/OMP40-2/ OMP60

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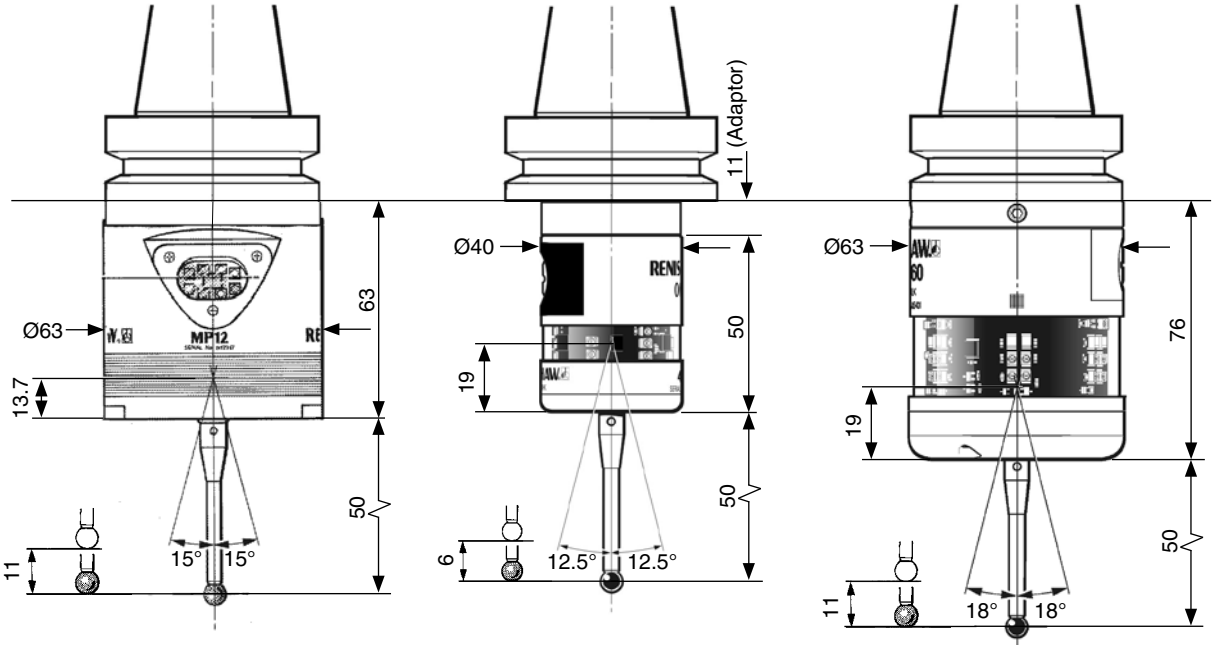
MP12

OMP40-2
(with shank adaptor)

OMP60



The OMP60 and OMP40-2 probes are part of a new generation of optical transmission machine probes that are compatible with all Renishaw's optical receivers (both "legacy" and new generation "modulated").

The OMP40-2 probe has been designed specifically to meet the demands of small machining centres and the growing family of high-speed machines fitted with small HSK and small taper spindles. The OMP60 probe has been designed, principally for medium to large machining and mill/turn centres.

Both probe designs encompass all of the MP12's functionality and can be configured using Trigger Logic ™. They also transmit legacy or modulated signals through 360°, at an angle of 90° to the spindle axis. This is a significant advantage over the MP12, as its transmission is uni-directional.

Main advantages of the OMP40-2 / OMP60

	OMP40-2	OMP60
• More compact size	✓	
• Robust stainless steel housing	✓	✓
• New modulated optical transmission (when used with OMI-2 or variant)	✓	✓
• Battery fitting is quick and easy using a quick release battery cassette	✓	✓
• All the functions of the MP12 can be configured using Trigger Logic ™	✓	✓
• Stylus trigger force adjustment		✓
• Increased resistance to shock and vibration	✓	✓
• Transmission range selectable	✓	✓
• 360° transmission and reception	✓	✓
• Shank and spin, turn on/off options		✓

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	MP12	OMP40-2	OMP60
Basic application	Small to medium machining and mill-turn centres	Small machining and mill-turn centres	Medium to large machining and mill-turn centres
Maximum range	OMI 3 metres OMM/MI 12 3 metres	OMI-2, -2T, -2H, 5 metres OMI 3 metres OMM/MI 12 5 metres	OMI-2, -2T, -2H, 6 metres OMI 4 metres OMM/MI 12 6 metres
Switch on / off method	Optical on / off Optical on / time out	Optical on / off Optical on / time out	Optical on / off Optical on / time out Shank on / off Spin on / off Spin on / time out
Type of transmission	Uni-directional infrared transmission (legacy ONLY)	Modulated or legacy infrared transmission over 360°	Modulated or legacy infrared transmission over 360°
Probing directions	5 directions: ±X, ±Y, +Z	5 directions: ±X, ±Y, +Z	5 directions: ±X, ±Y, +Z
Probe repeatability maximum (2σ) at stylus tip	1.0 µm	1.0 µm	1.0 µm
Weight (with batteries)	430 g	260 g	878 g
Probing force	XY plane lowest force: 0.65 N highest force: 1.60 N +Z direction: 8.00 N	XY plane lowest force: 0.5 N highest force: 0.9 N +Z direction: 5.85 N	XY plane (adjustable) lowest force: 0.75 N highest force: 1.4 N +Z direction 5.3 N
Stylus overtravel	XY plane ±15° +Z direction 11 mm	XY plane ±12.5° +Z direction 6 mm	XY plane ±18° +Z direction 11 mm
Max. recommended probe stylus length	100 mm	100 mm	150 mm
Battery type and life	4 x AA alkaline Standby 471 days typical 425 hours typical in continuous operation.	2 x ½ AA LTC Standby 250 days typical 270 hours typical in continuous operation*	2 x AA alkaline Standby 468 days typical 172 hours typical in continuous operation* 2 x AA LTC Standby 1019 days typical 595 hours typical in continuous operation*
IP rating	IPX8	IPX8	IPX8
Tool holder shanks	–	Same as MP12§	Same as MP12†
Interface	OMM/MI12 or OMI	OMI-2, -2T, -2H, -2C, OMM/MI12 or OMI	OMI-2, -2T, -2H, -2C, OMM/MI12 or OMI
Probe body	Aluminium	Stainless Steel	Stainless Steel
Quick-start/user Guide	H-2000-5121	A-4071-8500	A-4038-8501
Data sheet	H-2000-2221	H-4071-8200	H-2000-2131

* Traditional signal transmission in low power mode.

§ When used with adaptor A-4071-0031.

† If using the OMP60 in shank mode, you will not be able to use the existing MP12 shank.

For worldwide contact details, please visit our main web site at www.renishaw.com/contact

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