Data sheet
H-2000-2259-01-B

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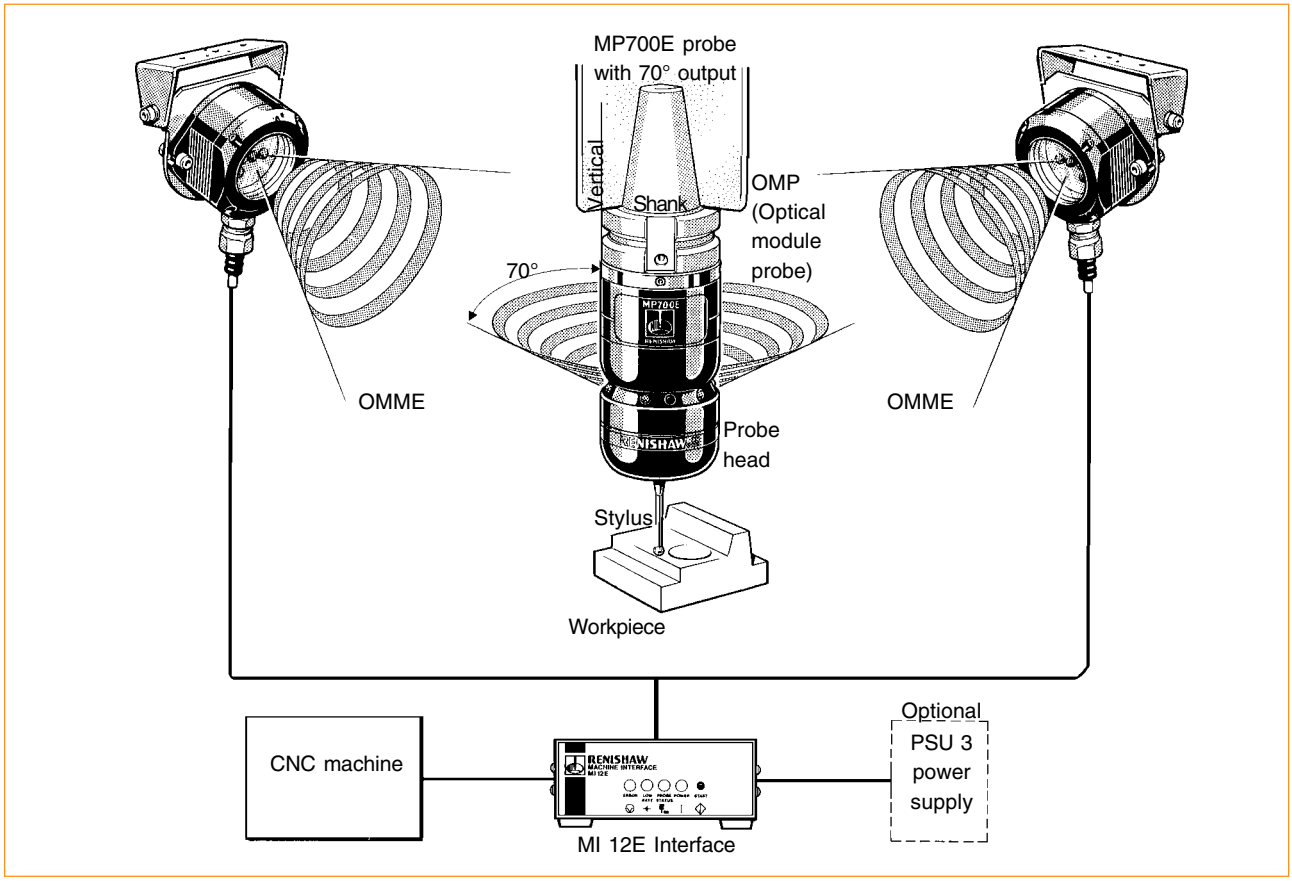
High power optical transmission system



Introduction

The high power optical transmission system is based upon standard optical systems, enhancements allowing the system to transmit up to 12 m (39.3 ft) and benefiting from reflections to maintain contact with the receiver. It enables the use of the MP700E and MP10E in applications requiring large probe and receiver separation.

System comparison		
	Operating range	Turn-on range
MP700E or MP10E and OMME MP700 or MP10 and OMM MP700 or MP10 and OMI	9.5 m (31.1 ft) 6 m (19.6 ft) 3 m (9.8 ft)	6 m (19.6 ft) 3 m (9.8 ft) 3 m (9.8 ft)

For dimensional and system operation, please use in conjunction with:
MP700 probe data sheet - part no. H-2000-2246,
OMM data sheet - part no. H-2000-2275,
MP10 probe data sheet - part no. H-2000-2262,
MI 12 data sheet - part no. H-2000-2195.

System components MP700E and MP10E

Using an MP700E or MP10E gives an increased 360° operating envelope over MP700 or MP10. The MP700E and MP10E probes are available in a 70° version with extended optical lobe.

OMME

The OMME incorporates an auto-gain circuit which changes sensitivity according to the strength of the OMP signal.

MI 12E

Processes signals between the OMME and the CNC machine control.

(CAUTION - For optimum system performance, the MI 12E should only be used with high power optical systems).

PSU3 power supply unit for MI 12E

Used when 24V supply is not available from the machine.

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Performance envelope - MP700E/MP10E probes (70° Output)

The MP700E/MP10E has a 360° transmission envelope over the ranges shown below.

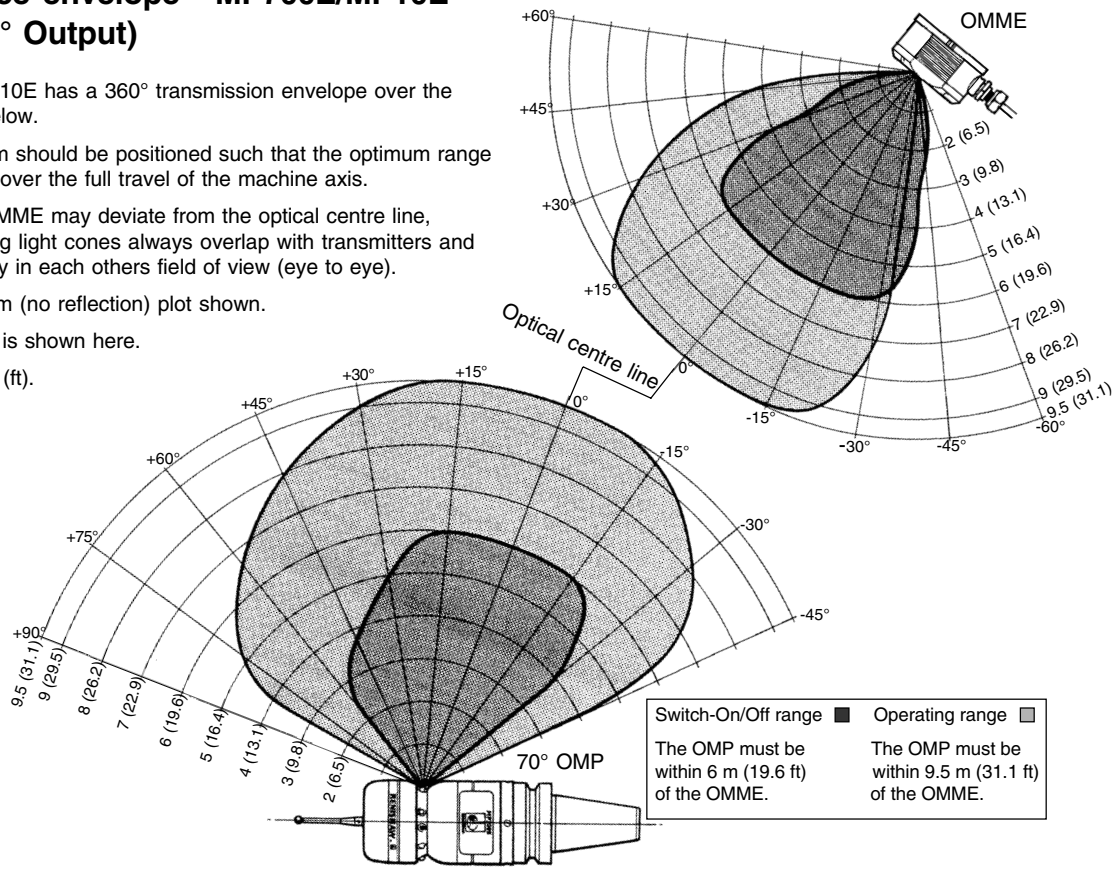
The probe system should be positioned such that the optimum range can be achieved over the full travel of the machine axis.

The OMP and OMME may deviate from the optical centre line, provided opposing light cones always overlap with transmitters and receivers mutually in each others field of view (eye to eye).

Absolute minimum (no reflection) plot shown.

Only one OMME is shown here.

Dimensions in m (ft).



Alkaline battery type Duracell MN 1604 or equivalent	Stand-by life	5% usage - 72 min/day		Continuous use	
		Optical On/Optical Off	Optical On/Timer Off	Optical On/Optical Off	Optical On/Timer Off
	Typical	Typical	Typical	Typical	Typical
MP10E	365 days	98 days	80 days	140 hrs	110 hrs
MP700E	381 days	36 days	34 days	43 hrs	41 hrs

Parts List - please quote the part no. when ordering equipment

Type	Part No.	Description
MP10E	A-2085-0134	MP10E 70° probe (as below), 2 x OMME, 2 mounting brackets, MI 12E and PS3-1C stylus.
MP700E	A-2107-0227	MP700E 70° probe (as below), 2 x OMME, 2 mounting brackets and MI 12E.
MP10E	A-2085-0133	MP10E 70° probe (as below), 1 OMME, 1 mounting bracket, MI 12E and PS3-1C stylus.
MP700E	A-2107-0226	MP700E 70° probe (as below), 1 OMME, 1 mounting bracket and MI 12E.
MP10E	A-2085-0132	MP10E 70° probe (as below), 2 x OMME, 2 mounting brackets, DIN-rail MI 12E and PS3-1C stylus.
MP700E	A-2107-0225	MP700E 70° probe (as below), 2 x OMME, 2 mounting brackets and DIN-rail MI 12E.
MP10E	A-2085-0131	MP10E 70° probe (as below), 1 OMME, 1 mounting bracket, DIN-rail MI 12E and PS3-1C stylus.
MP700E	A-2107-0224	MP700E 70° probe (as below), 1 OMME, 1 mounting bracket and DIN-rail MI 12E.
MP700E	A-2107-0159	MP700E 70° probe + battery, PS3-2C stylus, Ø8mm ball and tool kit. Factory set to optical off.
MP10E	A-2085-0096	MP10E 70° probe + battery, weak-link stem, Ø8mm ball and tool kit. Factory set to time out.
OMME	A-2033-7268	OMME.
MI 12E	A-2075-0323	MI 12E Interface Unit.
MI 12E (DIN)	A-2075-0329	MI 12E Interface Unit, DIN-rail mounting.

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

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