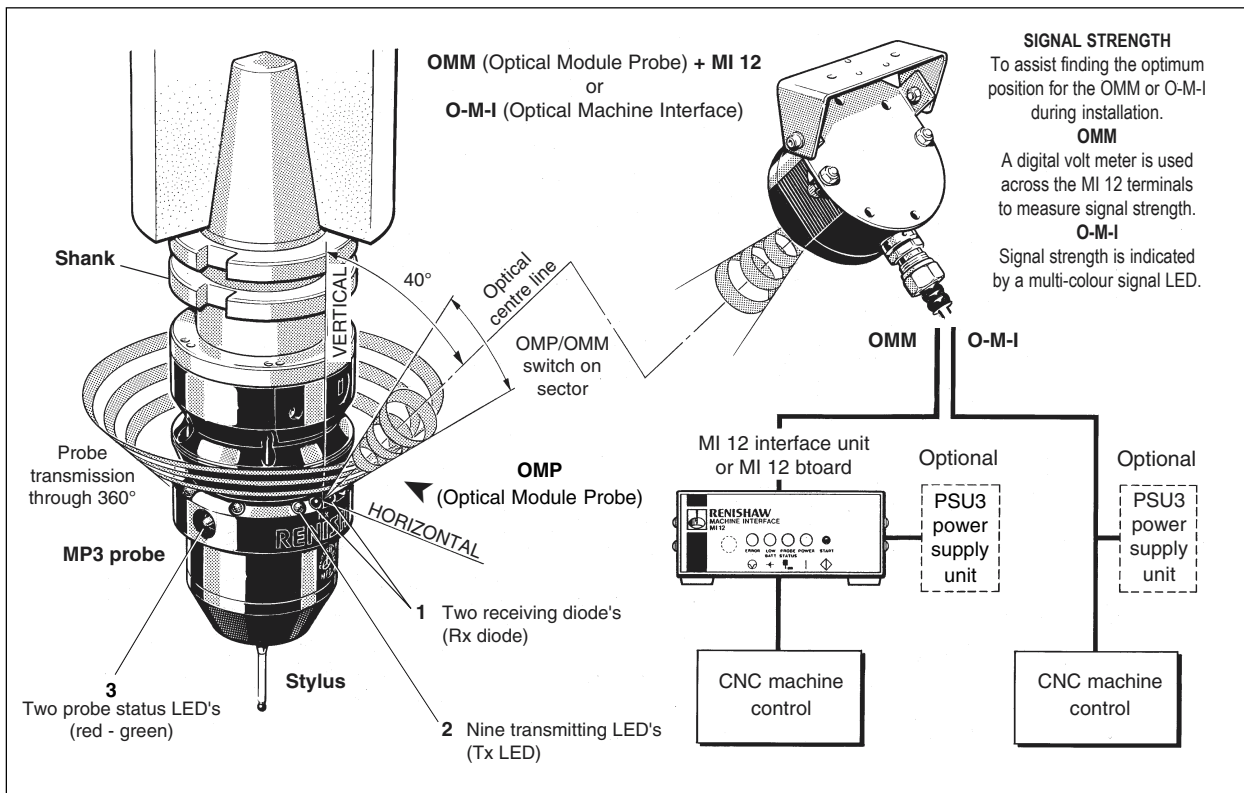


MP3 probe with 360° optical transmission system

Generous probe stylus overtravel combined with the 360° optical signal transmission, makes the system very suitable for workpiece set-up and inspection on medium/large machining centres.



SIGNAL STRENGTH
 To assist finding the optimum position for the OMM or O-M-I during installation.
OMM
 A digital volt meter is used across the MI 12 terminals to measure signal strength.
O-M-I
 Signal strength is indicated by a multi-colour signal LED.

SYSTEM COMPONENTS

MP3 Probe

3D Touch Trigger Inspection Probe ($\pm X$, $\pm Y$, $+Z$ directions).

OMP (Optical Module Probe)

A transmitter/receiver module, containing optical signal LED's and two 9V batteries to power probe operations. The OMP is sealed to IP68 and designed for reliable operation in the machine tool environment.

OMM (Optical Module Machine) + MI 12 interface unit

Signals pass from the CNC control to the OMP via the MI 12 and OMM and return along the same route. The MI 12 interface converts probe signals into a form compatible with the CNC control. OMM transmission and reception ranges are factory set to 100%. If OMM signals interfere with probes on other machines, then the optical range can be reduced.

O-M-I (Optical Machine Interface)

An alternative to the OMM + MI 12 interface, combining the functions of both OMM and MI 12 in one unit.

PSU3 power supply unit for O-M-I or MI 12

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

Probing software

Renishaw probing software is available for most types of machine control.

Each system component is fully described on its own separate Data Sheet - see Parts List on back page

OMP FEATURES

LED's continuously indicate system status

1. Probe machine/auto start signal - Receive diode (Rx) x 2

To conserve battery life, the probe is held in stand-by mode until the OMM or O-M-I sends a start signal to the OMP (Rx diodes), which switches the probe from stand-by to the operating mode.

Machine start is initiated by an M code command, alternatively **Auto start** sends a start signal once every second.

2. Transmit LED (Tx) x 9

Probe status/operating signals are transmitted through 360° from the OMP (Tx LED's) to the OMM or O-M-I.

3. Probe status LED x 2

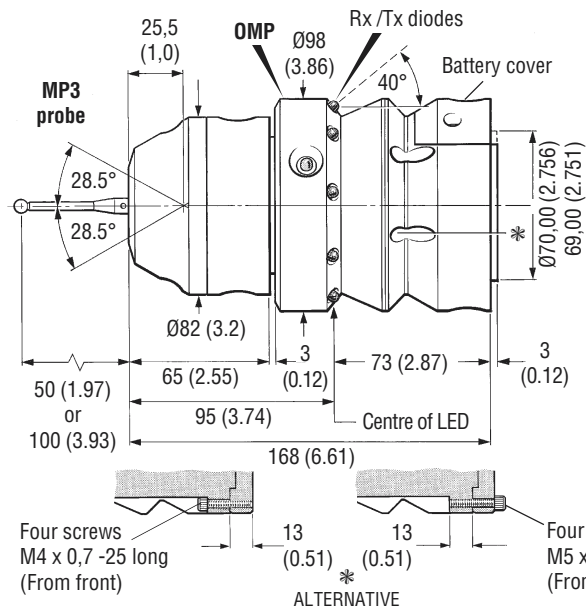
Stylus seated - LED flashes green
 Stylus deflected - LED flashes red
 Battery dead - LED constant red

OMP internal mode setting switch

- Time-out** occurs when the probe switches from the operating mode to the stand-by mode. Time-out is factory set to function 134 seconds after a probe trigger, it may be reset to 33 seconds.
- Optical switch-off** is an alternative to time-out. An optical switch-off signal is sent as soon as probing has finished, to obtain maximum battery life. **Note:** The START signal is used for switch-off. i.e. One M code performs both functions.
- Debounce time** is the time delay after the probe is switched-on, before it can be switched-off. It is only relevant when the probe is set to Optical-on/Optical-off mode. Debounce time is factory set to 5 seconds, it may be reset to 9 seconds.

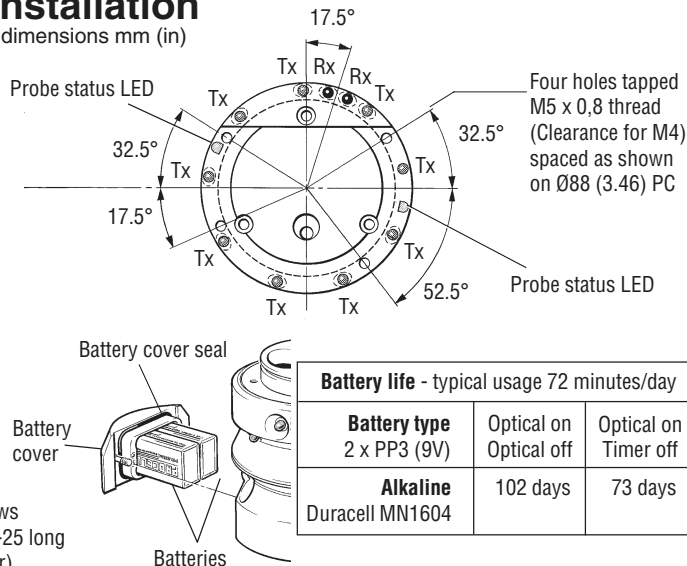
RENISHAW

DATA SHEET



Installation

dimensions mm (in)



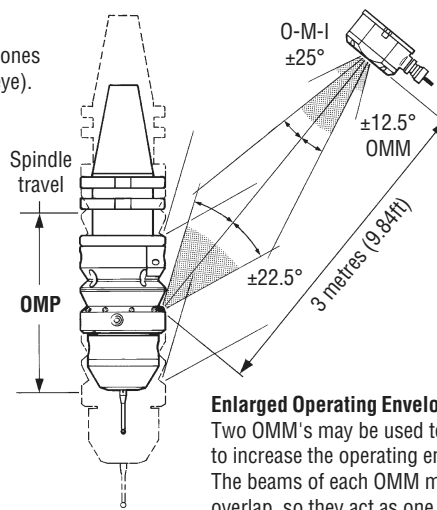
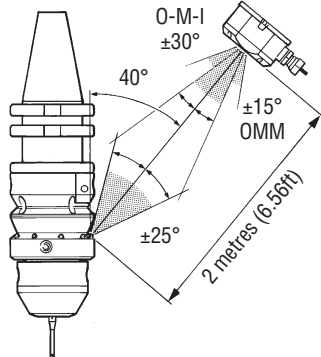
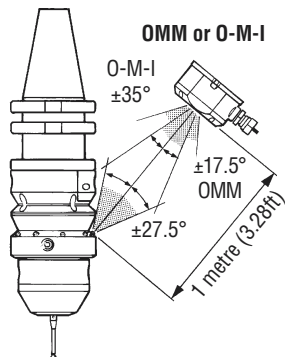
Battery life - typical usage 72 minutes/day

Battery type	Optical on	Optical on
2 x PP3 (9V)	Optical off	Timer off
Alkaline	102 days	73 days
Duracell MN1604		

OPERATING ENVELOPE

The OMP and OMM/O-M-I 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).

Note : Ensure the OMP is correctly orientated relative to the shank drive cog slot, so that the OMP switch-on sector is aligned with the OMM/O-M-I (see front page).



Enlarged Operating Envelope

Two OMM's may be used together to increase the operating envelope. The beams of each OMM must overlap, so they act as one unit.

Parts List - Please quote the Part No. when ordering equipment

Type	Part No.	Description
MP3 360° OMP system kit	A-2103-0005	MP3 probe + 360°/40° OMP with battery, stylus, OMM, MI 12 interface unit and tool kit.
MP3 360° OMP system kit	A-2103-0006	MP3 probe + 360°/40° OMP with battery, stylus, OMM, MI 12 interface board and tool kit.
360° OMP	A-2103-0008	360°/40° OMP with batteries and accessories.
Battery	P-BT03-0001	PP3 9V alkaline battery - two required.
Stylus	A-5000-3709	Ceramic stylus 50mm long with Ø6 ball.
Tool Kit	A-2053-7531	Tool kit.
Styli	—	See Brochure H-1000-3200 Styli and accessories.
MP3 Probe	—	See Data Sheet H-2000-2040 MP3 probe.
Shank	—	See Data Sheet H-2000-2011 Taper shanks.
OMM - optical module	—	See Data Sheet H-2000-2275 Optical module machine.
MI 12 - interface	—	See Data Sheet H-2000-2195 MI 12 interface unit.
O-M-I - optical interface	—	See Data Sheet H-2000-2285 Optical machine interface (alternative to OMM + MI 12).
PSU3 - power supply	—	See Data Sheet H-2000-2200 PSU3 power supply unit (optional).
Software	—	See Data Sheet H-2000-2289 Probe software for machine tools.

Renishaw plc, New Mills, Wotton-under-Edge, Gloucestershire, GL12 8JR, **United Kingdom**.

International Tel +44 1453 524 524 **National Tel** 01453 524 524 [07000 RENISHAW]

International Fax +44 1453 524 901 **National Fax** 01453 524 901

email genenq@renishaw.com **Internet** http://www.renishaw.com

Telex 437120 RENMET

Renishaw Latino Americana Ltda.,
Calçada dos Crisântemos 22,
C.C. Alphaville, C.e.p. 06453-000
Barueri SP, **Brazil**.
Tel +55 11 7295 2866
Fax +55 11 7295 1641

Renishaw S.A.,
15 rue Albert Einstein,
Champs sur Marne,
77437 Marne la Vallée,
Cedex 2, **France**.
Tel +33 1 64 61 84 84
Fax +33 1 64 61 65 26

Renishaw S.p.A.,
Via dei Prati 5,
10044 Pianezza,
Torino, **Italy**.
Tel +39 011 9 66 10 52
Fax +39 011 9 66 40 83

Renishaw Iberica S.A.,
Edificio Océano,
Calle Garrotxa 10-12, Parque Más Blau,
08820 Prat de Llobregat, Barcelona,
Spain.
Tel +34 93 478 21 31
Fax +34 93 478 16 08

Renishaw (Hong Kong) Ltd.,
Unit 4A, 3/F, New Bright Building,
11 Sheung Yuet Road, Kowloon Bay,
Hong Kong.
The Peoples' Republic of China.
Tel +852 2753 0638
Fax +852 2756 8786

Renishaw GmbH,
Karl-Benz Strasse 12,
72124 Pliezhausen,
Germany.
Tel +49 7127 9810
Fax +49 7127 88237

Renishaw KK,
Across City Nakano-Sakaue,
38-1, Chuo 1-chome,
Nakano-ku, Tokyo 164-0011,
Japan.
Tel +81 3 5332 6021
Fax +81 3 5332 6025

Renishaw A.G.,
Poststrasse 5,
CH 8808 Pfäffikon,
Switzerland.
Tel +41 55 410 66 66
Fax +41 55 410 66 69

Renishaw Inc.,
5277 Trillium Blvd,
Hoffman Estates,
Illinois 60192,
U.S.A..
Tel +1 847 843 3666
Fax +1 847 843 1744

Renishaw's Representative Offices

Australia **Tel** +61 3 9553 8267
Melbourne **Fax** +61 3 9592 6738

The Peoples' Republic of China
Beijing **Tel** +86 10 6410 7993
Fax +86 10 6410 7992

Indonesia **Tel** +62 21 428 70153
Jakarta **Fax** +62 21 424 3934

Singapore **Tel** +65 897 5466
Fax +65 897 5467

Renishaw's Liaison Offices
India **Tel** +91 80 509 5419
Bangalore **Fax** +91 80 509 5421
South Korea **Tel** +82 2 565 6878
Seoul **Fax** +82 2 565 6879