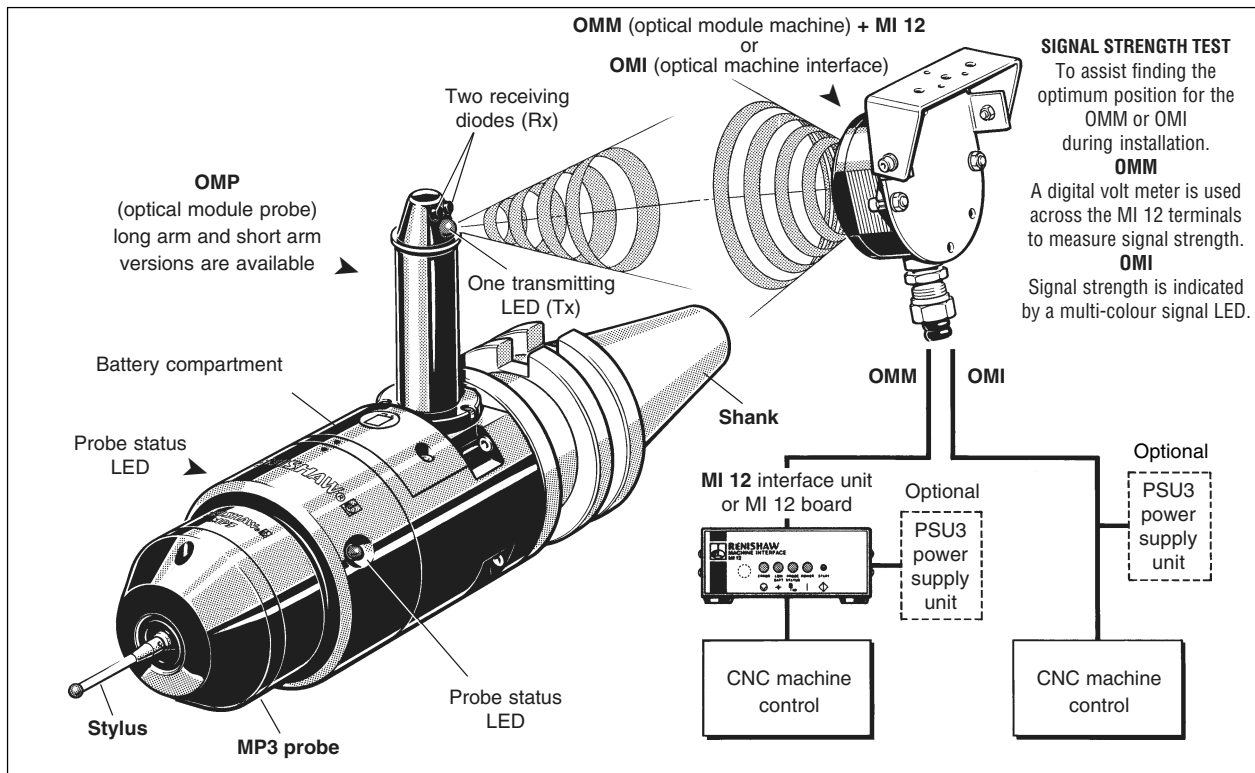


# MP3 probe with wide angle optical transmission



**SIGNAL STRENGTH TEST**  
To assist finding the optimum position for the OMM or OMI during installation.

**OMM**  
A digital volt meter is used across the MI 12 terminals to measure signal strength.

**OMI**  
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 IPX7 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 MI 12 and OMM and return along the same route. The MI 12 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.

### OMI (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 OMI or MI 12

Used when 24 V 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. Receive diode (Rx) x 2 - machine/auto start signal

To conserve battery life, the probe is held in stand-by mode until the OMM or OMI 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 1

Probe status/operating signals are transmitted from the OMP to the OMM or OMI.

#### 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 switches

- 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. To obtain maximum battery life an optical-off signal is sent as soon as probing has finished. **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 switch-on/optical switch-off mode. Debounce time is factory set to 5 seconds, it may be reset to 9 seconds.

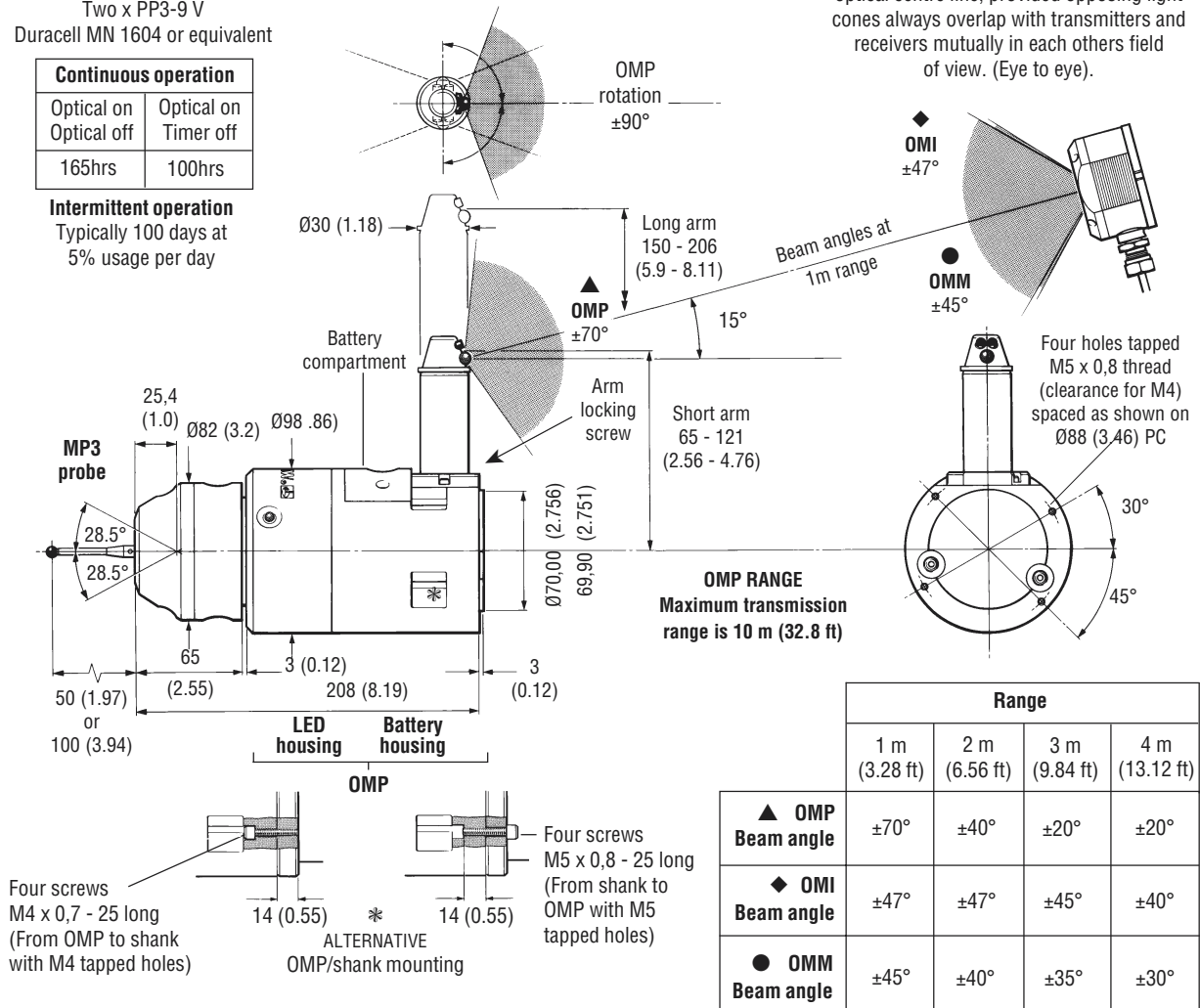
**BATTERY LIFE**  
**Alkaline battery type**  
 Two x PP3-9 V  
 Duracell MN 1604 or equivalent

Continuous operation	
Optical on Optical off	Optical on Timer off
165hrs	100hrs

**Intermittent operation**  
 Typically 100 days at  
 5% usage per day

## Installation

dimensions mm (in)



## OPERATING ENVELOPE

The OMP and OMM/OMI 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).

## Parts List - Please quote the Part no. when ordering equipment

Type	Part No.	Description
MP3-WAO short arm	A-2033-1160	MP3-WAO short arm Probe-OMP with stylus and batteries.
MP3-WAO long arm	A-2033-1161	MP3-WAO long arm Probe-OMP with stylus and batteries.
Short arm OMP	A-2033-1165	Short arm OMP with batteries and accessories.
Long arm OMP	A-2033-1166	Long arm OMP with batteries and accessories.
BatteryP-BT03-0001	PP3 9V alkaline	battery - two required.
Stylus	A-5000-3709	Ceramic stylus 50 mm long with Ø6 ball.
Tool kit	A-2053-7531	Tool kit.
Styli	—	See Brochure <b>H-1000-3200</b> Renishaw styli guide.
MP3 probe	—	See Data sheet <b>H-2000-2040</b> MP3 probe.
Shank	—	See Data sheet <b>H-2000-2011</b> Taper shanks.
OMM - optical module	—	See Data sheet <b>H-2000-2275</b> Optical module machine.
MI 12 - interface	—	See Data sheet <b>H-2000-2195</b> MI 12 interface unit.
OMI - optical interface	—	See Data sheet <b>H-2000-2285</b> Optical machine interface (alternative to OMM + MI 12).
PSU3 - power supply	—	See Data sheet <b>H-2000-2200</b> PSU3 power supply unit (optional).
Software	—	See Data sheet <b>H-2000-2289</b> Probe software for machine tools.

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