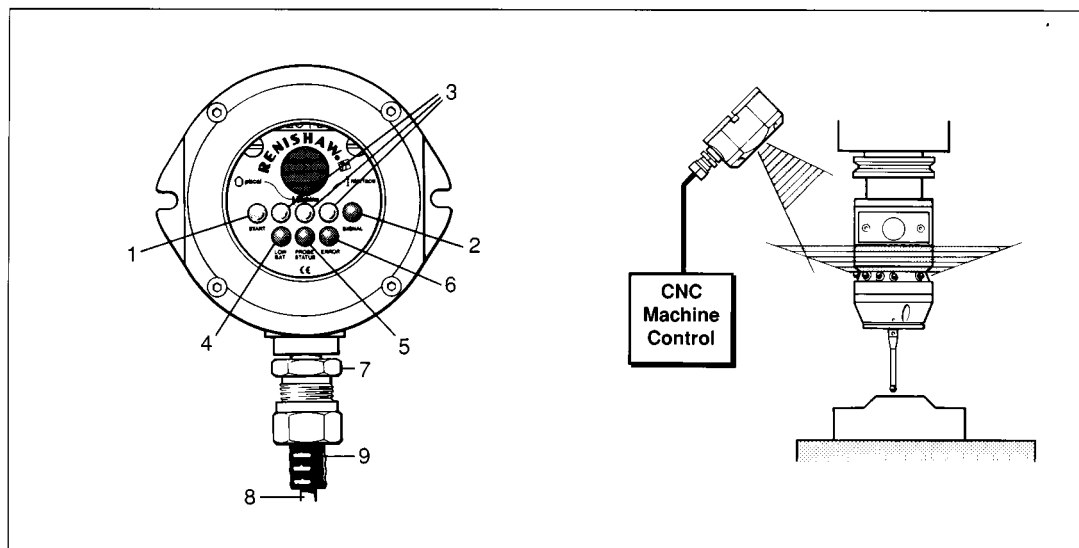


O-M-I - Optical Machine Interface

The O-M-I is an optical transmitter/receiver/interface, which conveys and processes signals between an inspection probe and the CNC machine control

The O-M-I is an alternative to the OMM + MI 12 interface arrangement



O-M-I STATUS LED's

Visual indication of system status is provided by LED's (Light Emitting Diodes).

1. **LED (Yellow) - START signal status**
Lit when start signal is transmitted.
2. **LED (Red, Yellow, Green)**
- **Signal strength received**
Red - No signal, or signal too weak.
Yellow - Marginal signal, system may/may not operate.
Green - Good signal, system will operate.
3. **LED (Clear x 3)**
Transmit control signals to the probe.
4. **LED (Red) - Low battery life**
Flashes on and off when battery voltage falls below a set level.
5. **LED (Red, Green) - Probe status**
Lit when O-M-I is powered.
Green - Probe seated
Red - Probe triggered or an error has occurred.
6. **LED (Red) - Error**
Lit when error condition exists.
i.e. optical beam obstructed/probe out of optical range/probe switched off/battery exhausted.
7. **Sealing Gland**
8. **Cable**
9. **Conduit**

FEATURES

- ☐ **Toughened glass window**
- ☐ **Sealed to IP68 for machine tool environment**
- ☐ **Internal Range Selection Switches**
Reception (RX) 25%, 50% or 100%
Transmission (TX) 50% or 100%
Factory set to longest ranges.
- ☐ **Machine Start/Auto Start Selection Switch**
Machine Start Machine control M code command.
Auto Start Start signal at one second intervals.
Factory set to machine start.
- ☐ **Outputs**

Probe Status	Skip	Low Battery	Error
Probe Status	Skip	Low Battery	Error

O-M-I OPTIMUM POSITION SETTING

To assist finding the optimum position for the O-M-I during system installation, signal strength received is indicated on the red/yellow/green LED (item 2).

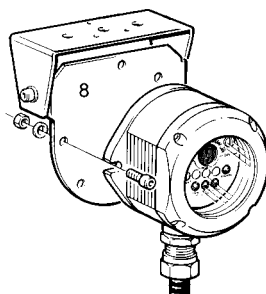
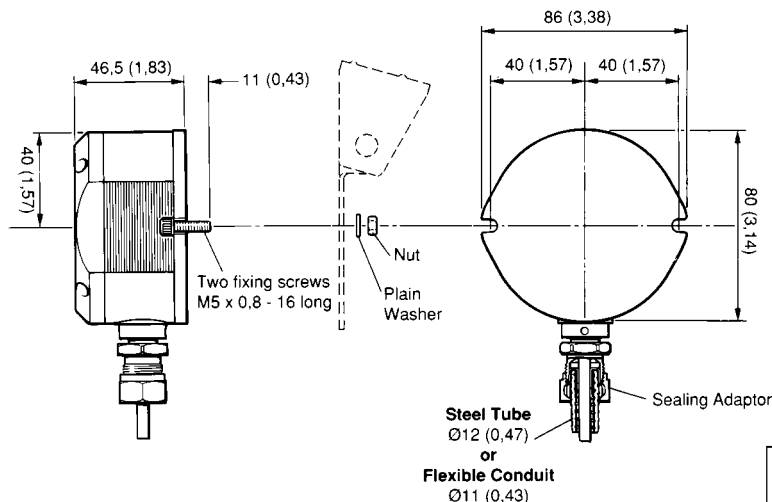
WARNING

If two systems are operating in close proximity to each other, take care to ensure that signals transmitted from the OMP on one machine, are not received by the O-M-I on the other machine, and vice versa.

The O-M-I may have to be shielded from direct light sources.

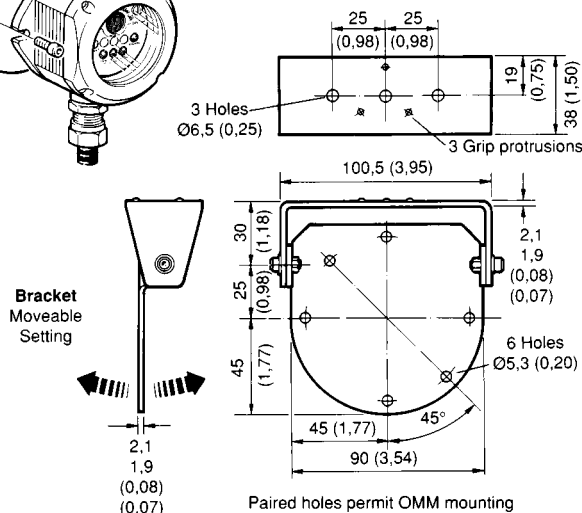
Installation

dimensions mm (inches)



O-M-I MOUNTING BRACKET

Allows O-M-I directional setting



O-M-I CABLE

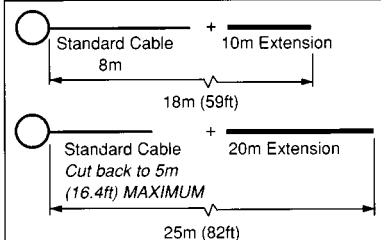
COLOUR	SIGNAL
Red	+24V (supply)
Black	0V (supply)
White	Start (+ve)
Brown	Start (-ve)
Grey	Output B (-ve)
Yellow	Skip (Output B)
Orange	Output B (+ve)
Blue	Outputs A (-ve)
Green	Error (Outputs A)
Violet	Low Bat (Outputs A)
Turquoise	Probe Status (Outputs A)
Pink	Outputs A (+ve)
Grey/Black	Machine Earth

Standard Cable - 8m long

Screened, 12 core, 7/0.1
Ø5.1mm x 8 metres long
(Ø0.2in x 26.2ft long)

Extension Cable - 10m or 20m long

Screened, 12 core, 7/0.2
Ø6.9mm x 10 or 20m long
(Ø0.27in x 32.8 or 65.6ft long)



- ☐ Install O-M-I with cable exiting from lower side for good coolant run off.
- ☐ Cable entry to the O-M-I is sealed with a gland.
- ☐ Cable protection against physical damage should be provided by either steel tube or flexible conduit.
- ☐ The conduit adaptor supplied by Renishaw, accepts either steel tube or flexible conduit.
- ☐ Route the cable away from potential sources of electro magnetic interference.
- ☐ Maintain screen through cable joins.

Parts List -

Please quote the Part No. when ordering equipment

Type	Part No.	Description
O-M-I	A-2115-0001	O-M-I complete with Cable Ø5,1mm (Ø0,2in) x 8m (26,2ft) long.
Extn Cable	M-2115-0045	Screened Extension Cable 10m (23,8ft) long, 12 cores, 7/0.2mm.
Extn Cable	M-2115-0046	Screened Extension Cable 20m (65,6ft) long, 12 cores, 7/0.2mm.
Mtg Bracket	A-2033-0830	O-M-I Mounting Bracket complete with Fixing Screws, Washers and Nuts.
Window	A-2115-0002	Window Kit for O-M-I.
Fuse Pack	A-2115-0034	Fuse Pack for O-M-I.
PG9 Adaptor	M-2008-0189	PG9 Cable Gland Adaptor.

Renishaw reserves the right to change specifications without notice.

Renishaw plc, New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR, **United Kingdom.** Internet genenq@renishaw.co.uk
International Tel +44 1453 524524 Fax +44 1453 524901 Telex 437120 RENMET G National Tel 01453 524524 Fax 01453 524901

Renishaw Inc.
623 Cooper Court, Schaumburg,
Illinois 60173, U.S.A.
Tel +1 847 843 3666
Fax +1 847 843 1744

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

Renishaw GmbH,
Karl-Benz-Strasse 12,
72124 Pliezhausen, Germany.
Tel +49 712 797960
Fax +49 712 788237

Renishaw S.p.A.,
Via dei Prati 5,
10044 Pianezza, Torino,
Italy.
Tel +39 11 9 66 10 52
Fax +39 11 9 66 40 83

Renishaw KK, 6F & 7F Anzai Building,
1-12, Hatagaya, 1-chome
Shibuya-ku, Tokyo 151, Japan.
Tel +81 3 5350 2201
Fax +81 3 5350 2207

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

Renishaw S.A., 74 Avenue de l'Europe,
Emerainville, 77437 Marne la Vallée,
Cedex 2, France.
Tel +33 1 64 61 84 84
Fax +33 1 64 61 65 26

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

Renishaw Iberica S.A. Edificio Oceano,
Calle Garrotxa 10-12, Parque Mas Blau,
08820 Prat de Llobregat, Barcelona, Spain.
Tel +34 3 478 21 31
Fax +34 3 478 16 08

Renishaw (Hong Kong) Ltd. - Representative Office,
The Peoples' Republic of China
Beijing. Tel +86 10 6462 2288 Extn 5524/5
Fax +86 10 6461 2687
Indonesia
Jakarta. Tel +62 21 471 3688
Tel +62 21 471 3688
Singapore
Tel +65 438 2779
Fax +65 438 2780