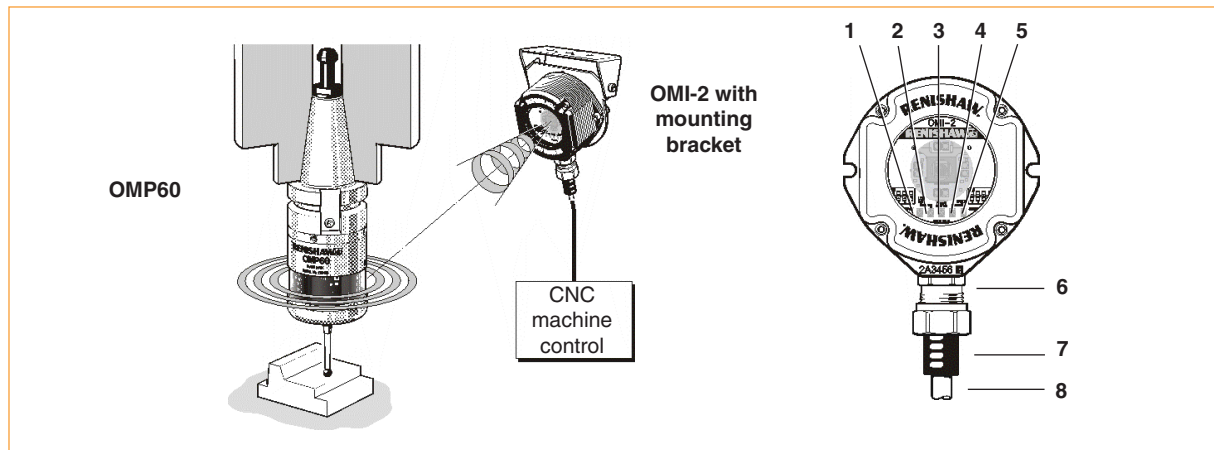


OMI-2 - optical machine interface

The OMI-2 is a combined optical receiver/interface, which conveys and processes signals between an inspection probe and the CNC machine control



FEATURES

- Modulation transmission for improved rejection of optical interference.
- Compatible with Renishaw machine probes that use modulated transmission.
- Toughened glass window.
- Sealed to IPX8 for machine tool environment.
- Internal range selection:

Reception (RX)	50% or 100%
Transmission (TX)	50% or 100%
Both factory set to	100%
- User configurable inputs:

Machine start	Machine control M code command (level / pulsed).
Auto start	Start signal at one second intervals.
- User configurable outputs:

Probe status 1.	SSR. N/O / N/C (level / pulsed).
Probe status 2a.	5 V isolated driven skip (level / pulsed).
Probe status 2b.	Driven at power supply voltage (level / pulsed).
Error SSR.	N/O / N/C.
Low battery SSR.	N/O / N/C.

OMI-2 OPTIMUM POSITION SETTING

To assist finding the optimum position for the OMI-2 during system installation, signal condition received is indicated on the red / yellow / green LED (item 5).

WARNING

If two systems are operating in close proximity, take care to ensure that signals transmitted from the OMP on one machine, are not received by the OMI-2 on the other machine, and vice versa.

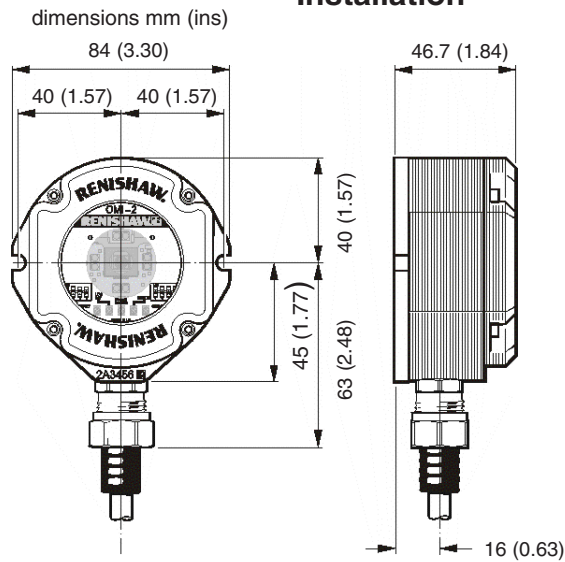
The OMI-2 may have to be shielded from direct light sources.

OMI-2 STATUS LEDs

Visual indication of system status is provided by LEDs.

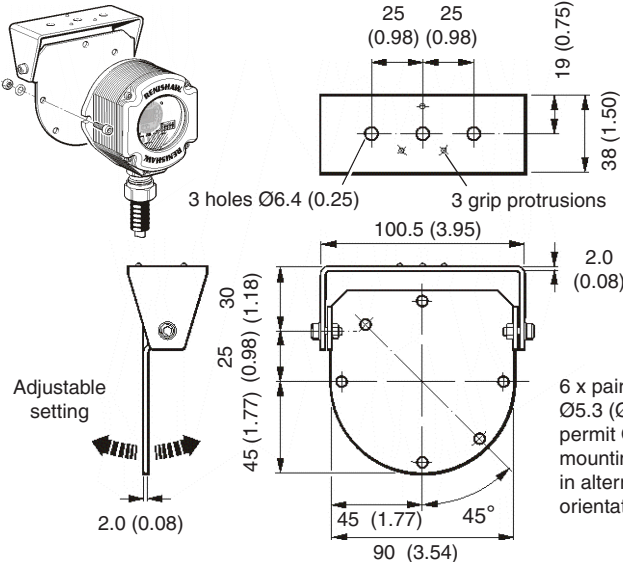
1. LED (Yellow) - START signal status.
Lit when a start signal is transmitted to the probe.
2. LED (Red) - Low battery life.
Lit when probe battery voltage falls below a set level.
3. LED (red, green) - Probe status.
Lit when OMI-2 is powered.
Green - Probe seated.
Red - Probe triggered or an error has occurred.
4. LED (red, blue, violet, yellow) - Error.
Indicates transmission error condition
e.g. optical beam obstructed / probe out of optical range / probe switched off / battery exhausted.
Red - Signal from probe has either failed or has stopped.
Blue - A second modulated signal is being received.
Yellow - Interference or weak probe signal is being received.
Violet - Interference or a weak probe signal has caused the trigger instant to be delayed.
5. LED (red, yellow, green) - Signal condition.
Signal condition received from probe.
Red - There is no signal from probe.
Yellow - Signal received from probe is either too weak or interference is present.
Green - The condition of signal received from probe is good.
6. Sealing gland.
7. Conduit.
8. Cable.

Installation



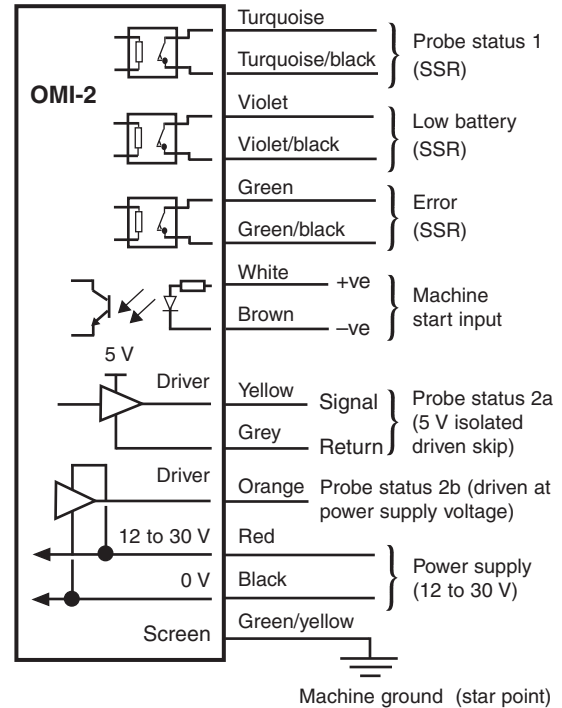
Mounting bracket

allows OMI-2 directional setting



Wiring diagram

(with the output groupings shown)



Cable installation

- Install OMI-2 with cable exiting from lower side for good coolant run off.
- Cable entry to the OMI-2 is sealed with a gland.
- Cable protection against physical damage should be provided by flexible conduit.
- Route the cable away from potential sources of electro magnetic interference.
- Maintain screen through cable joins.
- Cable specification
 Polyurethane $\varnothing 7.5$ ($\varnothing 0.29$) 13 core screened cable, each core 18 x 0.1
 Standard lengths 8 m (26 ft) or 15 m (49 ft).

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

Type	Part No.	Description
OMI-2	A-5191-0049	OMI-2 with 8 m (26 ft) cable, magnetic label, tool kit and User's guide.
OMI-2	A-5191-0050	OMI-2 with 15 m (49 ft) cable, magnetic label, tool kit and User's guide.
Mounting bracket	A-2033-0830	Mounting bracket complete with fixing screws, washers and nuts.
Conduit kit	A-4113-0306	Conduit kit with 1 m (3.28 ft) of polyurethane conduit and bulkhead connector (a clearance hole for M 16 thread is required).
Window replacement kit	A-5191-0019	Comprising window assembly with 'O' ring, 3 x stainless steel M3 x 14 mm long screws, 3 x stainless steel M3 x 5 mm long screws and 2.5 mm hexagon wrench.
Tool kit	A-5191-0300	2.5mm hex wrench, 4 mm hex wrench, 14 x ferrules, 2 x M5 screws, 2 x M5 washers and 2 x M5 nuts.
User's guide	H-2000-5233	OMI-2 Installation and user's guide.



H-2000-2205-01

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