

# LASERMET LED-WIFE INSTRUCTION MANUAL



## WAVELENGTH INDICATOR FOR EYEWEAR

Issue 3

# LASERMET WIFE Instruction Manual

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## **1 Safety Warnings**

This device is intended to be used as part of a safety system which may be used to protect personnel and equipment from possible injury, damage, or loss.

As such it must be installed and wired according to these instructions and tested by suitably qualified persons. No attempt may be made to tamper with the parts, open them, or use them outside of the parameters contained herein.

The units are only designed to be fixed to surfaces using their inbuilt fixing holes. They must not come into contact with each other or any other moving part when in use. The parts should never be subject to impact or mechanical strain.

Safety switches should never be defeated or bypassed. It is imperative that all steps are taken to ensure that any spare actuators are made unavailable, such that they cannot be used to defeat the switch or reduce the protection offered by the system in any way.

## 2 Concept

The Lasernet Wavelength Indicator is intended to be used in an indoor position at a place where there are several laser sources, to indicate to personnel which source is in use.

This is especially useful outside rooms or enclosures containing multiple lasers to assist personnel in selecting appropriate eyewear for the laser in use.

Typically, the indicator is fitted in a room, adjacent to a door or on a piece of equipment. The high-quality moulded case is pleasing to the eye and the gloss finish makes the unit easy to clean.

The indicator is able to indicate up to six different sources. A red LED light indicates which source is in use.

A blank area is provided adjacent to each light to allow a suitable description to be given, e.g. a legend. This may be written on with indelible marker, by attaching a label, or the unit may be supplied with legends permanently printed behind the windows.

When fitted adjacent to a door, the indicator is intended to be located adjacent to the door handle, approximately in line of sight as a person reaches for the door handle to open the door.

The indicator offers safety advantages over traditional warning indicators which tend to be erected over the top of the door, such as:

- Safer low voltage operation- no working on live equipment;
- Ground level access for installation and maintenance- no working at height;
- Fitted beside the door, not over it- no obstruction of the doorway during installation and maintenance.

The Indicator is usually operated by a switch which also enables the different lasers such that the indicator always corresponds to the laser which is enabled. Lasernet can provide suitable switches and design assistance.

Lasernet provides a full range of laser interlock equipment including control systems, interlock switches, illuminated warning signs, laser shutters, door locks, external power supplies etc. which can be connected to provide a complete laser interlock system. Full support, design and installation is available from Lasernet, please contact us for any queries. Contact details are given at the end of this manual.

## 3 Installation

The Wavelength Indicator is designed to be permanently attached to a wall or other fixed vertical surface.

### 3.1 Positioning

The Wavelength Indicator should be mounted in a convenient position for use and wiring.

Normally it is located on the outside ('safe') side of the entry door of the controlled area, on the wall adjacent to the door handle, approximately 1.4m up from floor level.

During installation, wired connections will need to be made from the Wavelength Indicator to its controller/selecter switch and allowance should be made for the installation of electrical conduit or trunking if required to make entry to the unit.

Ideally the indicator should be attached directly to the wall with the cables being fed from within the wall. For hollow walls this should be straightforward. For solid walls it may be easiest and neatest to feed the cables right through the wall from the other side.

Alternatively, the indicator may be attached to a round BESA conduit box which may be buried or surface-mounted, though this last option will result in the unit projecting further from the wall, making it less stable and more vulnerable.

It is recommended that the centre of mounting is at least 100mm horizontally from the door surround/architrave and at least 150mm from the edge of the door. There must be a flat unobstructed area of wall extending at least 70mm above and 110mm below the mounting centre to allow fitment and removal.

If other matching Lasernet signs and/or keypads are being fitted above or below the indicator the centres should be at least 140mm apart vertically.

Refer to Figure 1 for details of the fixing holes and cable entry. The backplate is secured using preferably four screws on a 35.4mm square around the cable entry point. The backplate may be used as a marking template. If using a BESA round conduit box, the holes will align with the cover fixing holes.

Once all the holes have been made, secure the backplate as shown in figure 1.

Feed the cables through the hole in the centre of the backplate.

**NOTE:** Make the electrical connections before attaching the unit to the backplate, see the Wiring section.

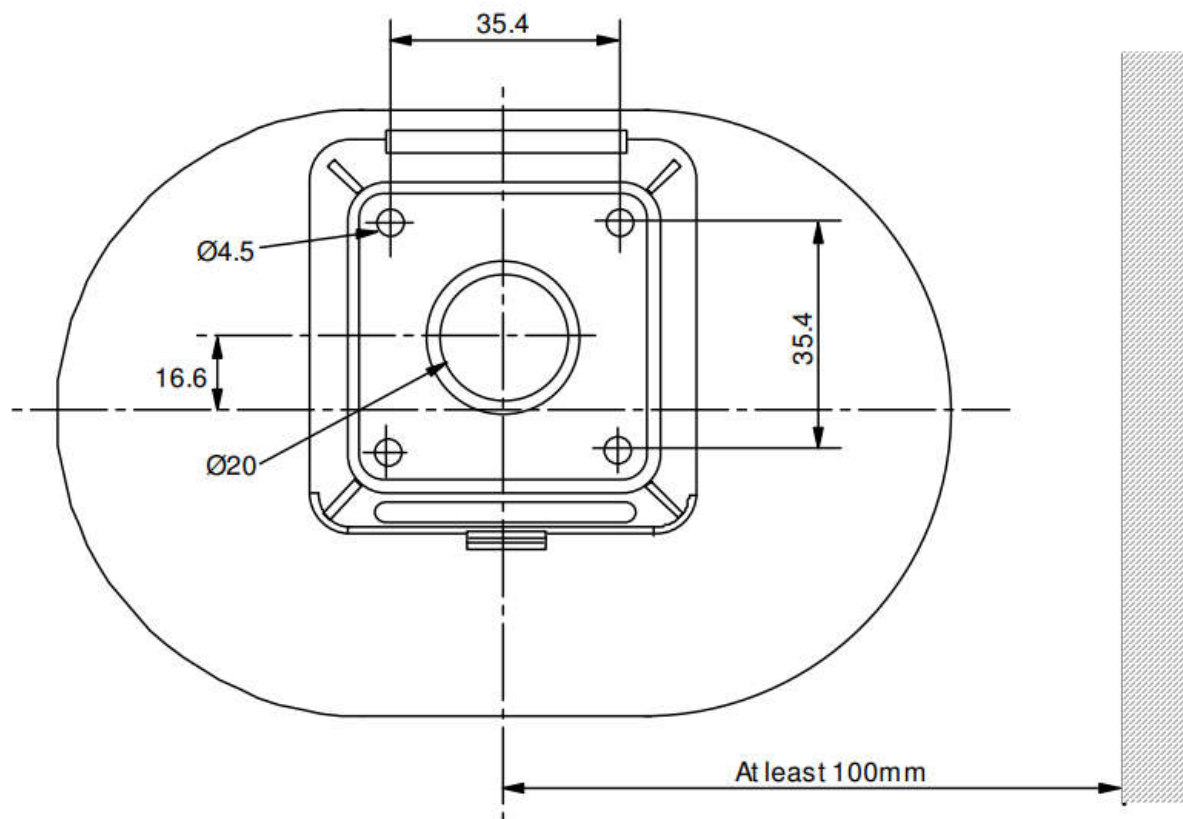


Figure 1. Wall Drilling Details

## 4 Wiring

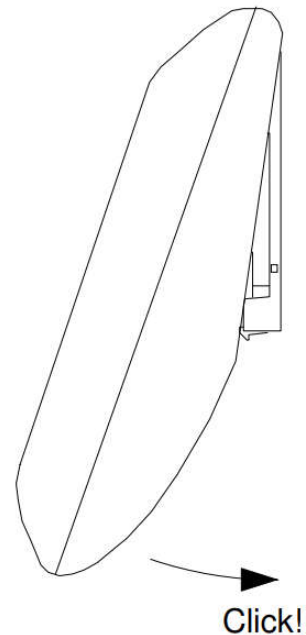
The indicator is powered by 24VDC. Each lamp has its own positive connection on the terminal block and one bundled ground connection on the terminal block for all lamp grounds. Wires coloured red for positive and black for negative.

Low voltage multicore flexible wire such as burglar alarm wire is ideal for connecting to the indicator. Lasermet can supply suitable cable.

The indicator typically draws less than 0.02A per lamp. To protect the wiring and terminals the supply should have an overcurrent protection device rated at 1A maximum.

## 4.1 Attaching the Indicator to the Backplate

Once all the wiring connections have been made, attach the indicator to the backplate by hooking the top of the indicator onto the backplate and swinging the bottom against the wall. Press the indicator firmly until it clicks into place.



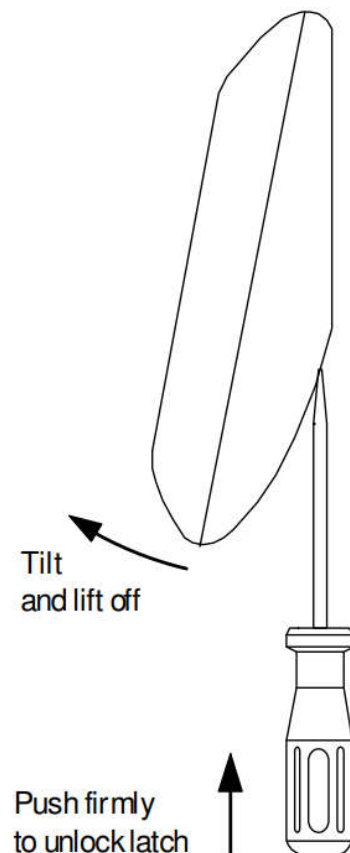
## 4.2 Removing the Indicator from the Wall

Once the indicator has been locked to the wall, a 5mm flat screwdriver is required to release the locking latch before it can be removed, see figure 6.

Ensure that the supply is turned off.

Insert the screwdriver into the recess in the bottom of the indicator at the back and push the latch upwards to disengage it from the case. Note that the latch is quite secure, and some force may be needed before it releases. When the latch is released it will be possible to tilt the bottom of the indicator forwards and then lift it off the backplate.

Use a 3mm flat screwdriver to disconnect the wires from the terminals.



## 5 Specifications

Dimensions	160w x 108h x 39d mm
Weight	145g
Power Consumption	2mA per lamp at 24VDC

Dimensions are approximate. Values given as 'typical' are average values measured across a number of samples and are not guaranteed. Lasermet reserve the right to alter any specification without prior notice.

## Product Disposal

To help protect the environment do not dispose of this product with landfill waste. Take it to a waste recycling facility that processes electrical and electronic items or return it to Lasermet or your local distributor for proper disposal.



## 6 Warranty

Lasermet provide a 12-month warranty for defects in materials and manufacture, from the date of installation or delivery. Installations completed by Lasermet are covered against defects in workmanship for 12 months.

Damage or defects caused by other factors are not covered. For example, industrial contamination, incorrect cleaning, storm damage. Consequential loss is not covered under warranty. Compensation for indirect or direct loss or damage is expressly excluded. Rectification of the defects or a replacement does not initiate a new warranty period.

For all deliveries, payments and other legal transactions, English law takes precedence for any litigation.



## 7 Contact Details

Lasernet provide a full range of laser interlock equipment including interlock switches, illuminated warning signs, laser shutters, entry keypads with built-in fail-safe override timer, door locks, external power supplies etc. which can be interconnected to provide a complete system. We also supply equipment and consultancy covering all aspects of laser safety. Full support, design, and installation is available from Lasernet, please contact us for any queries.

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