LASERMET

SLATTED LASER BLOCKING VISION PANEL

OPERATION AND MAINTENANCE MANUAL

Issue 2

LASERMET
SLATTED LASER BLOCKING VISION PANEL
Instruction Manual

Contents

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

Laser-blocking, slatted-blinds are ideal for use in operating theatres and are effective in blocking all medical lasers of all wavelengths.

Tested in accordance with Laser safety standard IEC 60825-4 and designed to fit into window and door openings in operating theatres, this highly effective and professional laser blocking system is ideal for hospitals and other facilities where there is a need to guard against the escape of laser beams. The unit can be installed as a standard fit within the door or window aperture or it can be fitted as a flush fit where the surfaces of the unit match those of the aperture edges. It can also be retrofitted to existing doors and windows.

A simple lever operates the slats within the window to either allow or block laser light from penetrating. Selecting the double-sided lever option enables the blind to be operated from both sides. The system uses 6mm toughened glass in front of the slatted blind to prevent the ingress of dust and infection.

The standard fit unit is a fully bonded, semi hermetic unit that eliminates the need for an unhygienic, metal housing and allows a tight seal to be made between the glass and the beading. It can be positioned either centrally across the door thickness, with a bead either side, or flush on one side with a single bead on the other. It comprises of three panes of glass, two of which have alternating lines of laser blocking material. The central pane can be raised and lowered by a handle, so the lines move in or out of alignment and thereby allow fully controlled, discreet vision through the panel.

The flush fit vision panel is specifically designed and manufactured to suit the exact thickness of a door, so once fitted, the surface of the glazing lies completely flush with the door faces. It is sealed to the door with silicone mastic, thus providing a very hygienic detail that has no crevices or ledges for dirt or bacteria to harbour. The flush fit unit is fully bonded and is semi-hermetic comprising four panes of glass, two of which have alternating lines of laser blocking material.

The retrofit unit enables the existing glazing of a door to be upgraded with minimal disruption, whilst providing all the benefits of the Standard Fit unit. Common uses include upgrading to provide laser and/or x-ray protection.

Options

- blackout glass
- obscure glass
- x-ray proof - Lead equivalents up to 3.3mm thick
- security glass
- fire glass - 30 and 60 minute, insulated and non-insulated
- tinted glass suitable for vivariums
- antibacterial coated glass

N.B. outer glass panes available in toughened or laminated glass to comply with BS 6262

Handles

- standard lever
- anti-ligature conical knob
- both handles available in either 316 stainless steel or anti-bacterial copper alloy

Lasermet 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 Lasermet, please contact us for any queries. Contact details are given at the end of this manual.

3 Operation

The vision panel is operated simply by turning the lever which changes the state of the blinds from being open to closed.

Open Position

Closed Position

4 Maintenance

The unit does not require regular maintenance.

4.1 Periodic Inspection

The vision panel should be inspected for any signs of damage periodically (for example, on an annual basis) in accordance with the laser safety officers' instructions.

5 Cleaning Instructions

Clean with non-abrasive glass cleaners, mild soaps or detergents diluted with water to clean glass.
Clean using a soft cloth or synthetic window leather.
Use a soft cloth for drying glass.

6 Specifications

Dimensions

- standard widths and heights for all models are 200 x 600mm, 400 x 400mm, 400 x 600mm and 250 x 800mm (width x height)
- nominal thicknesses for Standard Fit and Retrofit models is 20mm (0.75")
- nominal for Flush Fit model to suit customer door thickness

Front and Rear Outer Glass Panes

- 6mm Toughened Safety Glass to BS EN 12150

Operating handle

- Single Sided / Double sided
- Stainless Steel / Copper Alloy
- Standard Lever / Thumb turn

Outer Sealant

- Black Silicone Rubber

Fire Rating

- F30 or F60 to BS 476 Pt: 22

Conformance to Laser Safety Standards

Tested in accordance with IEC 60825-4
(Safety of Laser Products Part 4: Laser Guards)

Conforms to the requirements of ANSI Z136.1

Permissible Exposure Limits are shown below

Irradiated Area	PEL (T3) 10s	PEL (T2) 100s
4 mm^2	3.9 MW/m^2	2.2 MW/m^2
2000 mm^2	0.62 MW/m^2	0.35 MW/m^2

7 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.

8 Contact Details

Lasermet 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 Lasermet, please contact us for any queries.

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