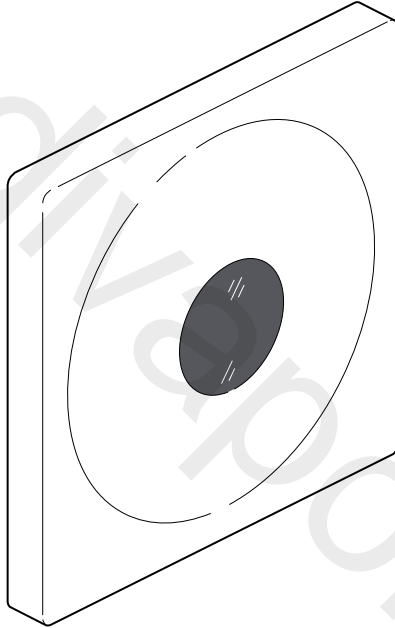




# Ligature Resistant Sensor



## PRODUCT MANUAL

### IMPORTANT

**INSTALLER:** This product manual is the property of the customer and must be retained with the product for maintenance and operational purposes.

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## INTRODUCTION

The Rada Ligature Resistant Sensor (LR Sensor) is a vandal resistant sensor designed for use in secure units. Depending on your required installation, the three basic elements can be varied in quantity and type to suit the installation.

The system elements comprise of:

The Rada LR Sensor

This Product Manual covers the installation of this product

The Control box and the Solenoid Valve

Refer to the Rada Pulse Electronic Washroom Product Manual

## DESCRIPTION

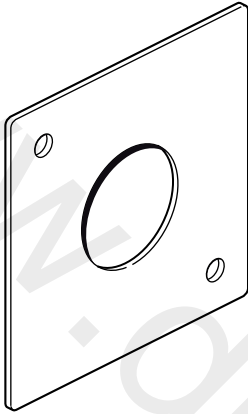
The user activates the LR Sensor, the flow of water to the washbasin or shower runs for a preset period, after which the water is automatically shut off. If the user wishes to continue they simply reactivate the sensor. Time setting functions can be easily programmed into the **Rada Pulse Control Box** using the **Rada Pulse Hand Held Programmer**.

All electrical connections are totally sealed and the system operate at a very safe low voltage.

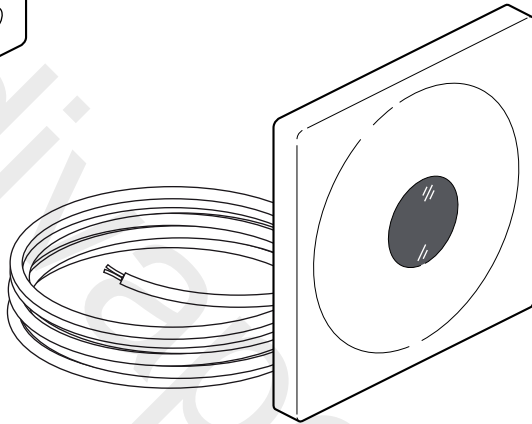
If you experience any difficulty with the installation or operation of your new LR Sensor, please read this product manual carefully before contacting Kohler Mira Ltd. Our contact details can be found on the back cover of this guide.

# PACK CONTENTS

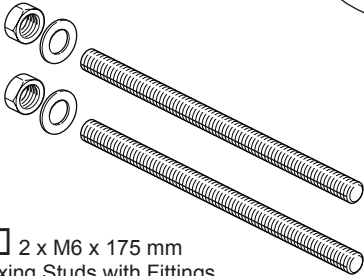
Tick the appropriate boxes to familiarise yourself with the part names and to confirm that all of the parts are included.



1 x LR Sensor Backplate



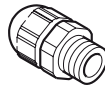
1 x LR Sensor (complete with 3.0 metre 2 core cable)



2 x M6 x 175 mm  
Fixing Studs with Fittings



1 x Plug-in Connector



1 x Cable Gland

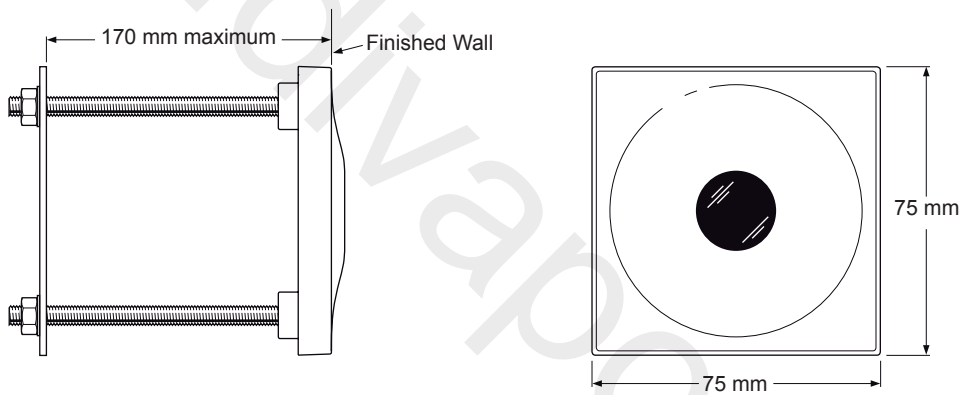


2 x Watertight 3m Connectors

# SPECIFICATIONS

<b>Material</b>	Brass
<b>Finish</b>	Chrome plated
<b>Cable</b>	3 m of 2 core sheathed cable with connections sealed into the sensor
<b>Operating voltage</b>	12 V AC via the 2 core cable
<b>Temperature range</b>	4 to 70 °C
<b>Protection</b>	IP65
<b>Activation distance</b>	0 to 50 mm depending on the reflectivity of the object
<b>Attachment</b>	2 x M6 x 175 mm fixing studs (rear fixing)

## Dimensions



**Note!** The M6 fixing studs supplied allow the LR sensor to be attached through a wall to a maximum thickness of 165 mm. If longer M6 fixing studs are required, these will have to be purchased through your local supplier.

# INSTALLATION

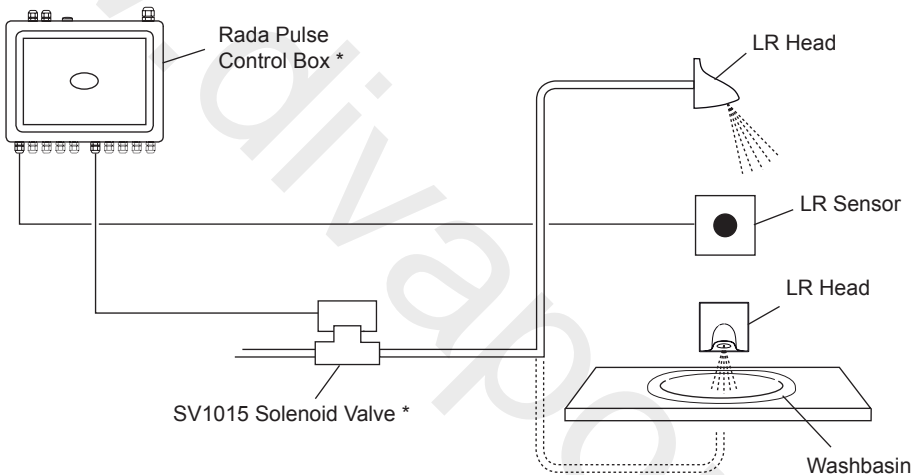
## General

Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

**Important!** The instructions contained in this product manual is for the installation of the LR Sensor only.

If the LR Sensor is to be used in a controlled washroom environment, for example using a Rada Pulse System, please read both product manuals before installing your LR Sensor.

## Rada LR Operating System - Schematic



\* Refer to the Rada Pulse Electronic Washroom Product Manual for additional information on these products.

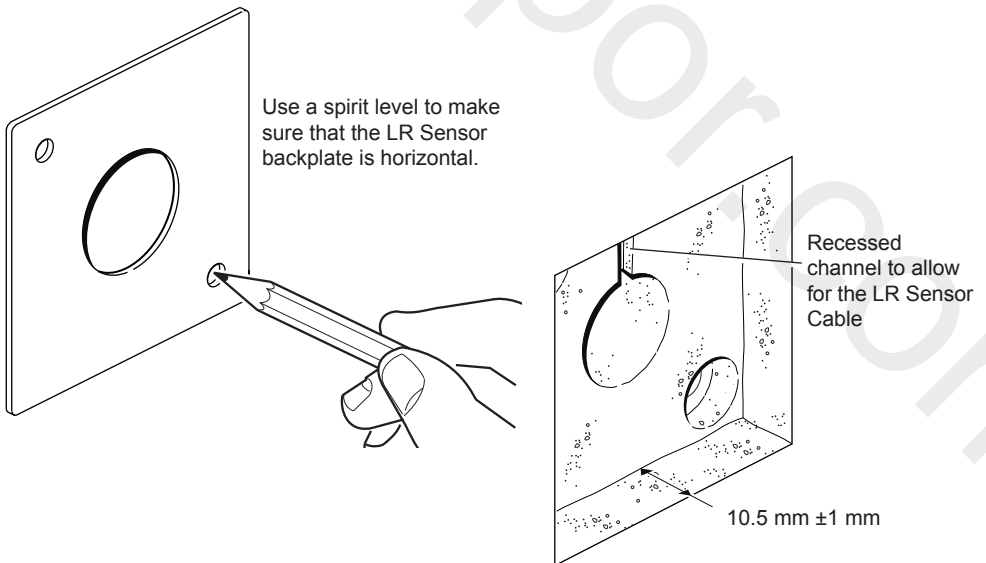
## Installing the LR Sensor

1. Decide on a suitable location for the LR Sensor.
2. Position the LR Sensor backplate onto the level finished wall.  
**Note!** Use a spirit level to make sure that the LR Sensor backplate is horizontal.  
Make sure the M6 fixing studs holes are in the correct position for the LR Sensor.
3. Mark the centre positions for the M6 fixing studs and the sensor cable.
4. Drill pilot holes for the centres of the three holes.
5. Use the electrical box sinker tool to recess the wall to a depth of 10.5 mm ( $\pm 1$  mm).

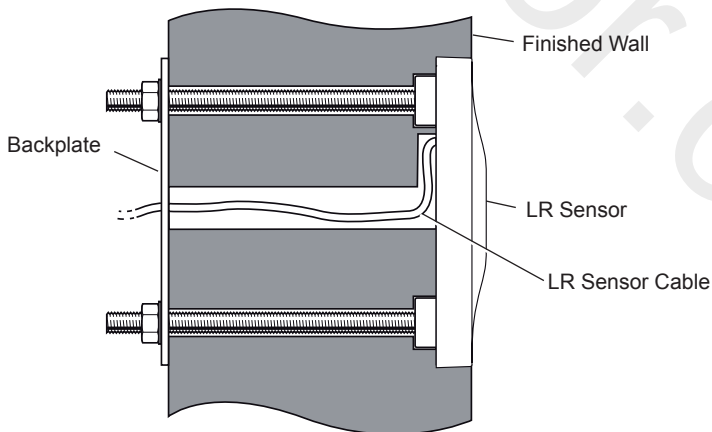
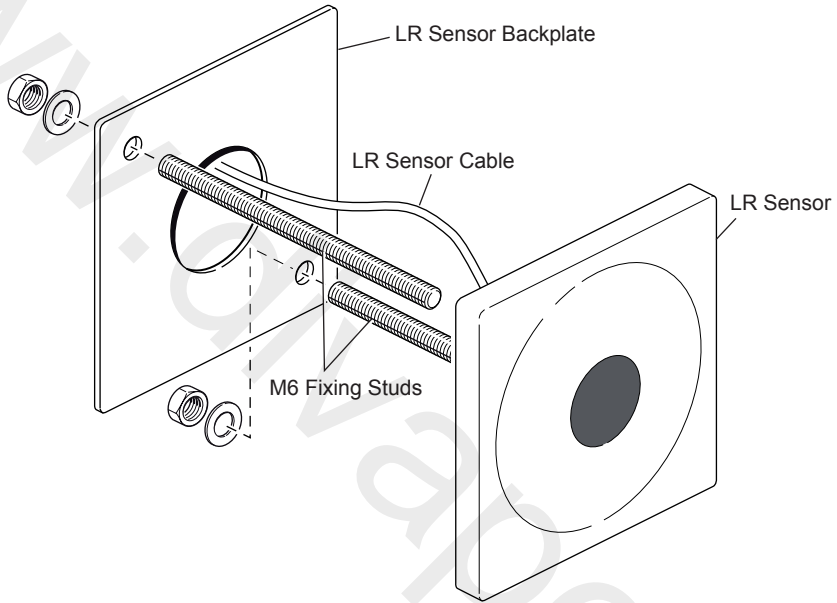
**Caution! The LR Sensor MUST be recessed or built within the wall (i.e. flush with the finished wall surface) to deliver maximum resistance to ligature and vandalism.**

**Note!** The LR Sensor is the same size as a single electrical mounting box and the recommended method of recessing the LR Sensor is to use an Electrical Box Sinker Tool. An alternative method would be stitch drilling then to use a club hammer and chisel.

6. To allow for the lugs on the rear of the LR Sensor, the fixing stud holes will require a further recess of  $\text{Ø}20$  mm x 10 mm ( $\pm 1$  mm).  
**Note!** It's recommended to use a  $\text{Ø}10$  mm and then a  $\text{Ø}20$  mm drill bit.
7. Recess a channel for the sensor cable.
8. Drill the centre hole ( $\text{Ø}10$  mm) to allow for the LR Sensor cable.
9. Check that the LR Sensor can be installed flush with the finished wall.



10. Attach the M6 fixing studs to the LR Sensor and fit into the wall.  
**Note!** Make sure that the LR Sensor cable does not become caught.
11. Place the LR Sensor backplate/washers over the M6 fixing studs and secure with the nuts.
12. Grout around the LR Sensor with hard setting compound.
13. This completes the installation of the Rada LR Sensor, refer to the Rada Pulse Electronic Washroom product manual to commission your system.





## MAINTENANCE

### Cleaning

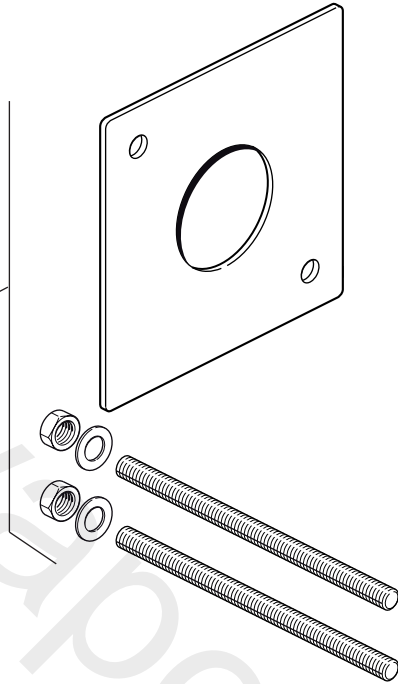
Many cleaners contain abrasive and chemical substances and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned with a mild washing up detergent or soap solution, and then wiped dry using a soft cloth.

## FAULT DIAGNOSIS

Refer to section: '**Fault Diagnosis**' in the Rada Pulse Electronic Washroom Product Manual.

# SPARES

1640.033  
LR sensor backplate assembly



# NOTES

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# CUSTOMER CARE

## Guarantee

Kohler Mira Ltd. guarantee this product against any defects in materials or workmanship for a period of one year from the date of purchase.

To be covered by this guarantee, service work must only be undertaken by Kohler Mira Ltd. or approved agents.

## Not covered by this guarantee

Defects or damage arising from incorrect installation, improper use or failure to maintain in accordance with the instructions in the product manual, including the build-up of limescale. Defects or damage if the product is taken apart, repaired or modified by a person not authorised by Kohler Mira Ltd. or approved agents.

## After Sales Service - how we can help you

We have a network of fully trained staff ready to provide assistance, should you experience any difficulty operating your Rada equipment.

## Spare Parts

All functional parts of Rada products are kept for up to ten years from the date of final manufacture. If during that period, our stock of a particular part is exhausted we will, as an alternative, provide an equivalent new product or part at a price equating to the cost of repair to the old, bearing in mind the age of the product.

All spares are guaranteed for 12 months from the date of purchase. Spares that have been supplied directly from us can be returned within one month from the date of purchase providing that they are in good order and the packaging unopened.

**Note!** Returned spares will be subject to a 15% restocking charge and authorisation must be obtained before return.

## Customer Care Policy

If within a short space of time of installation the product does not function correctly, first check with the operation and maintenance advice provided in this Manual to see if the difficulty can be overcome. Failing this, contact your installer to make sure that the product has been installed and commissioned in full accord with our detailed installation instructions. If this does not resolve the difficulty, please ring your nearest Rada contact who will give every assistance and, if appropriate, arrange for the local Service Engineer or Agent to call on a mutually agreeable date.

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## Contact:

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### Rada Controls

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### SPECIFICATION ENQUIRIES

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