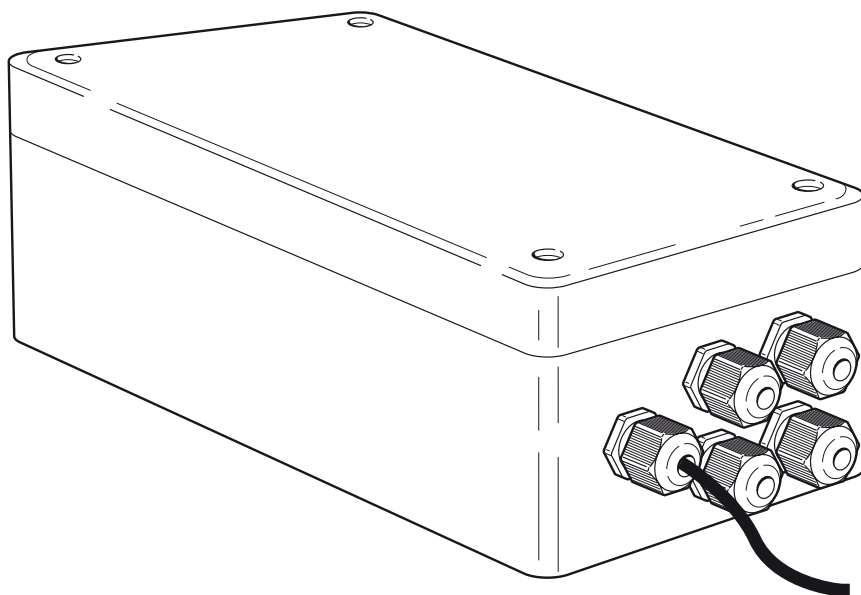




## Rada Universal 12 V RMS 50/60 Hz Transformer



### IMPORTANT

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

# INTRODUCTION

The Rada Universal 12 V RMS 50/60 Hz Transformers are designed to supply 12 V RMS 50/60 Hz to a range of Rada mono controls (that is, units that do not require connection to Rada Control Boxes) and consists of a short circuit proof safety isolating transformer.

The transformer enclosure is water-resistant, and intended for wall-mounting to a suitable flat dry surface (fixing screws are not supplied). This appliance is intended for permanent connection to the fixed electrical wiring of the mains electric system. The transformer must be connected to the electrical supply with a double isolating pole switch.

A mains 230 V RMS 50/60 Hz supply cable of 2 metre length is pre-connected, this must not be removed; do not renew the cable inside the box if damaged. Safe low-voltage 12 V RMS 50/60 Hz output is fuse-protected internally. This appliance is IP54 protected, provided protection caps are fitted to unused cable grommets.

## SAFETY : WARNINGS : IMPORTANT POINTS

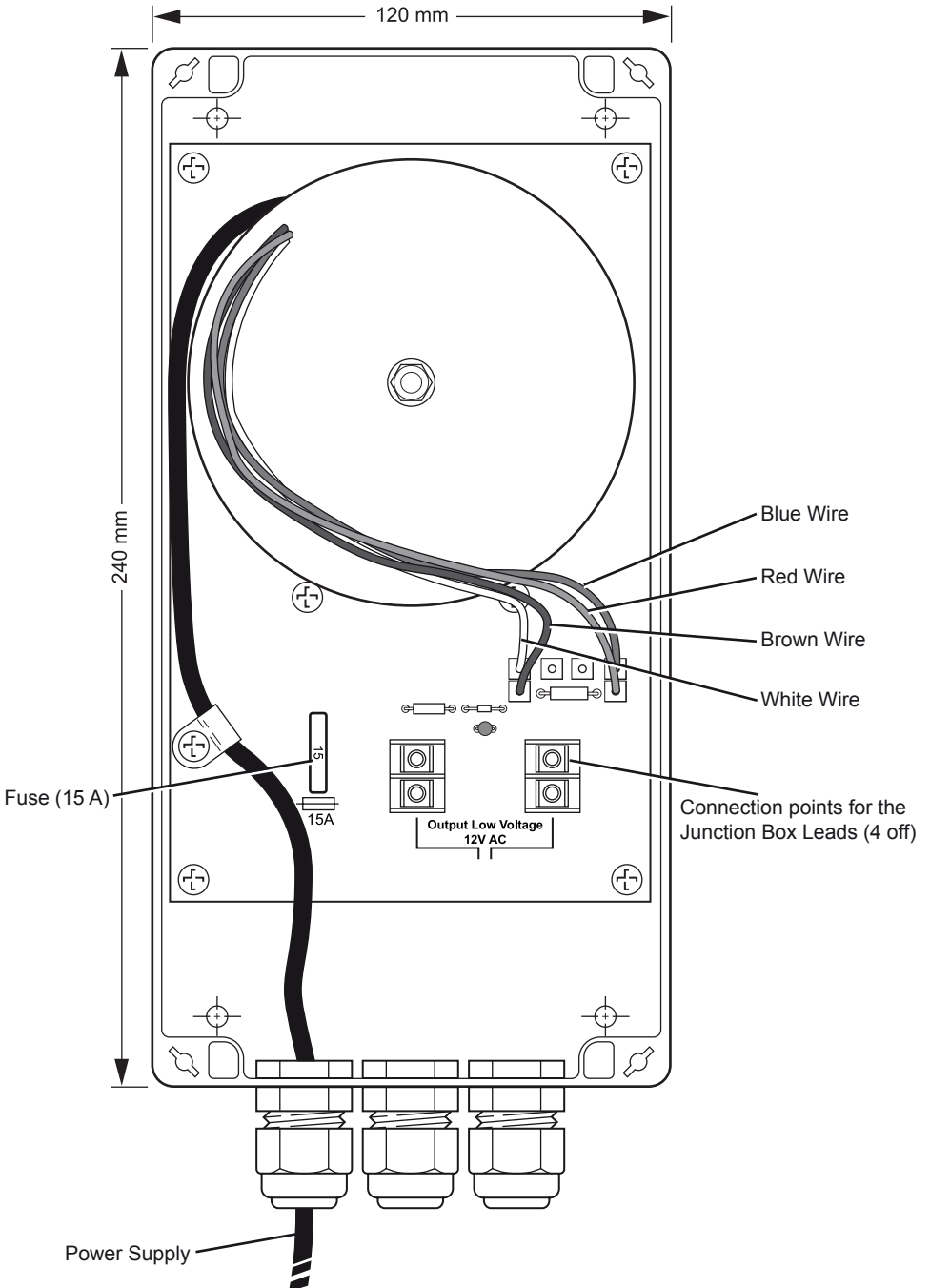
1. The installation, commissioning and maintenance of this unit must be carried out in accordance with the instructions and information given in this Manual, and must be conducted by designated, qualified and competent personnel.
2. Installations must comply with all current Building, Water, Plumbing and Electrical Regulations in force, and relevant Guidelines.
3. The installation and usage environment should not be subject to extremes of temperature, humidity, unauthorised tampering or wilful abuse.
4. Continued use of this product in conditions outside of limits listed in this manual can severely affect the performance and reduce the effective service life.
5. Rada products are precision-engineered and should give continued superior and safe performance, provided:
  - they are installed, operated and maintain in accordance with our recommendations.
  - periodic attention is given as necessary to maintain the product in good functional order.

# SPECIFICATION

|  |                               |
|--|-------------------------------|
| Product Reference                                    |                               |
| Rada Universal 12 V RMS 50 Hz Transformer            | 093.72                        |
| Electrical   |                               |
| Supply voltage                                       | 230 V RMS $\pm$ 10 % 50/60 Hz |
| Power consumption                                    | 160 VA                        |
| Output voltage                                       | 12 V RMS $\pm$ 10 % 50/60 Hz  |
| Protection   | IP 54                         |
| Ambient temperature                                  | 0 - 40 °C                     |
| Maximum humidity                                     | 80 %                          |
| Rating   | IP54                          |
| Material   |                               |
| Enclosure  | polycarbonate                 |
| Complies with all relevant directives for CE marking |                               |

Rada Universal 12 V RMS 50/60 Hz Transformer - serves up to 16 mono controls

**Note!** Isolate mains voltage supply before removing the cover.

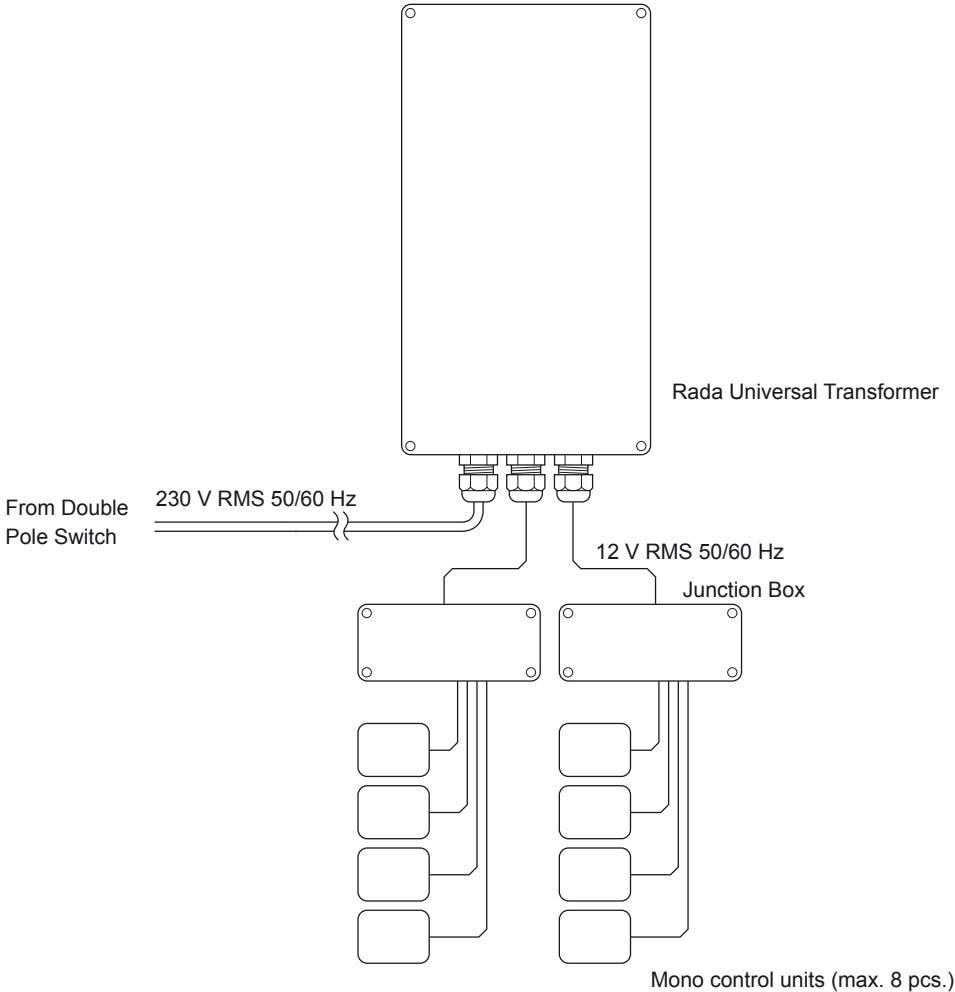


## Cable connections for the Rada Universal 12 V RMS 50/60 Hz Transformer

**Important!** The output cable sizes and lengths must be carefully selected to prevent excessive voltage drop to the supply for the units.

**Note 1!** Maximum overall diameter of cable 6 mm  $\pm$ 0.5 mm.

**Note 2!** Maximum overall diameter of cable 4 mm  $\pm$ 0.5 mm.



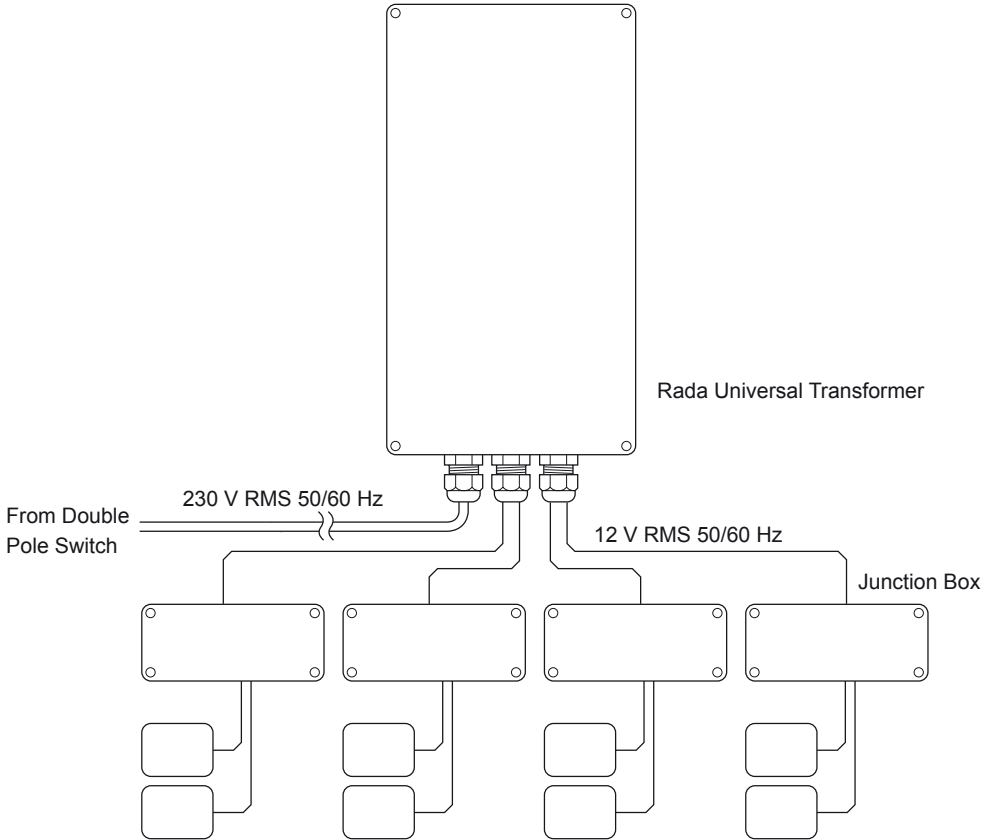
| Distance between the Rada Universal Transformer and the Junction Box |    |     |                         |
|--|----|-----|-------------------------|
| Maximum cable length (m) <small>Refer to Note 1</small>              |    |     | Size (mm <sup>2</sup> ) |
| 2.5  | 3  | 3.5 | 2.5                     |
| Distance between the Junction Box and the mono control units         |    |     |                         |
| Maximum cable length (m) <small>Refer to Note 2</small>              |    |     | Size (mm <sup>2</sup> ) |
| 5  | 5  | 4   | 0.5                     |
| 11   | 10 | 10  | 1.0                     |
| 15   | 15 | 13  | 1.5                     |
| 25   | 23 | 21  | 2.5                     |

## Cable connections for the Rada Universal 12 V RMS 50/60 Hz Transformer

**Important!** The output cable sizes and lengths must be carefully selected to prevent excessive voltage drop to the supply for the units.

**Note 1!** Maximum overall diameter of cable 6 mm  $\pm$ 0.5 mm.

**Note 2!** Maximum overall diameter of cable 4 mm  $\pm$ 0.5 mm.



Mono control units (max. 8 pcs.)

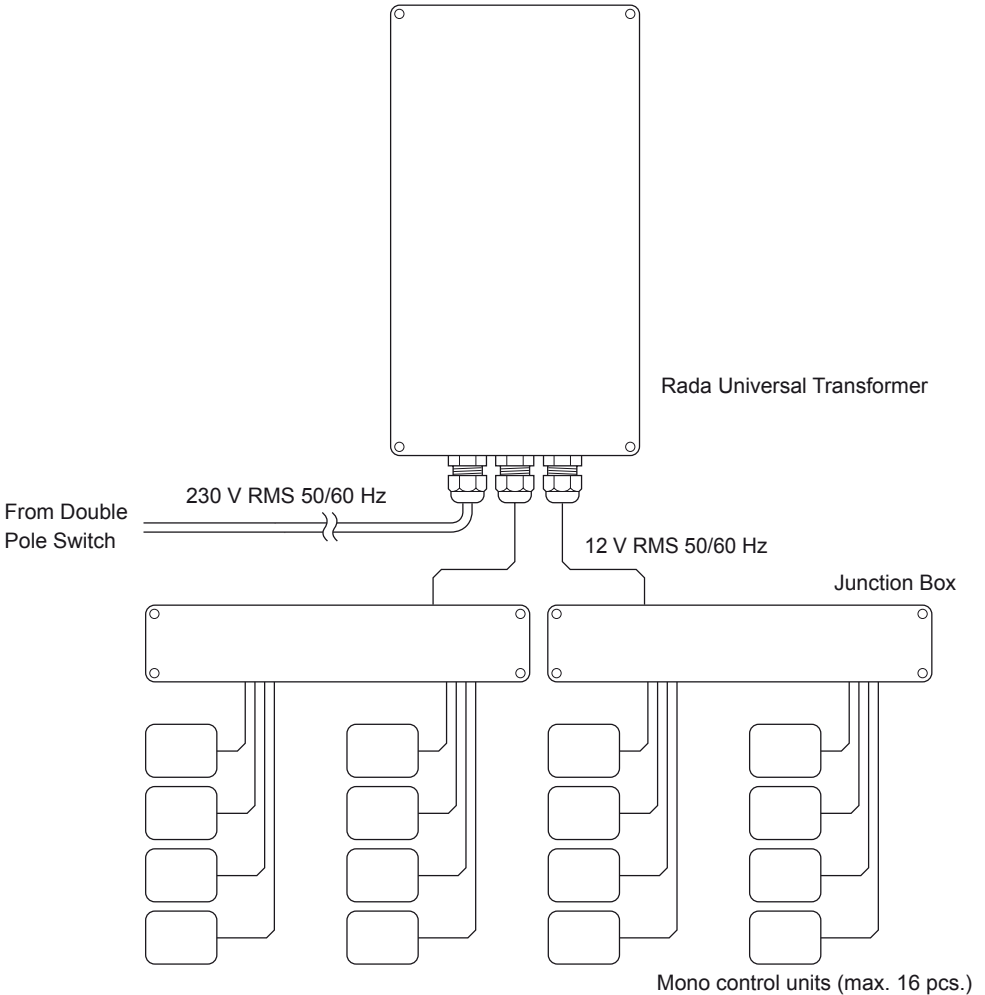
| Distance between the Rada Universal Transformer and the Junction Box |    |     |    |     |                         |
|--|----|-----|----|-----|-------------------------|
| Maximum cable length (m) <small>Refer to Note 1</small>              |    |     |    |     | Size (mm <sup>2</sup> ) |
| 2.5  | 3  | 3.5 | 4  | 4.5 | 2.5                     |
| Distance between the Junction Box and the mono control units         |    |     |    |     |                         |
| Maximum cable length (m) <small>Refer to Note 2</small>              |    |     |    |     | Size (mm <sup>2</sup> ) |
| 6  | 5  | 4.5 | 4  | 3   | 0.5                     |
| 13   | 11 | 10  | 8  | 6   | 1.0                     |
| 18   | 15 | 13  | 11 | 9   | 1.5                     |
| 30   | 25 | 21  | 17 | 13  | 2.5                     |

**Cable connections for the Rada Universal 12 V RMS 50/60 Hz Transformer**

**Important!** The output cable sizes and lengths must be carefully selected to prevent excessive voltage drop to the supply for the units.

**Note 1!** Maximum overall diameter of cable 6 mm ±0.5 mm.

**Note 2!** Maximum overall diameter of cable 4 mm ±0.5 mm.



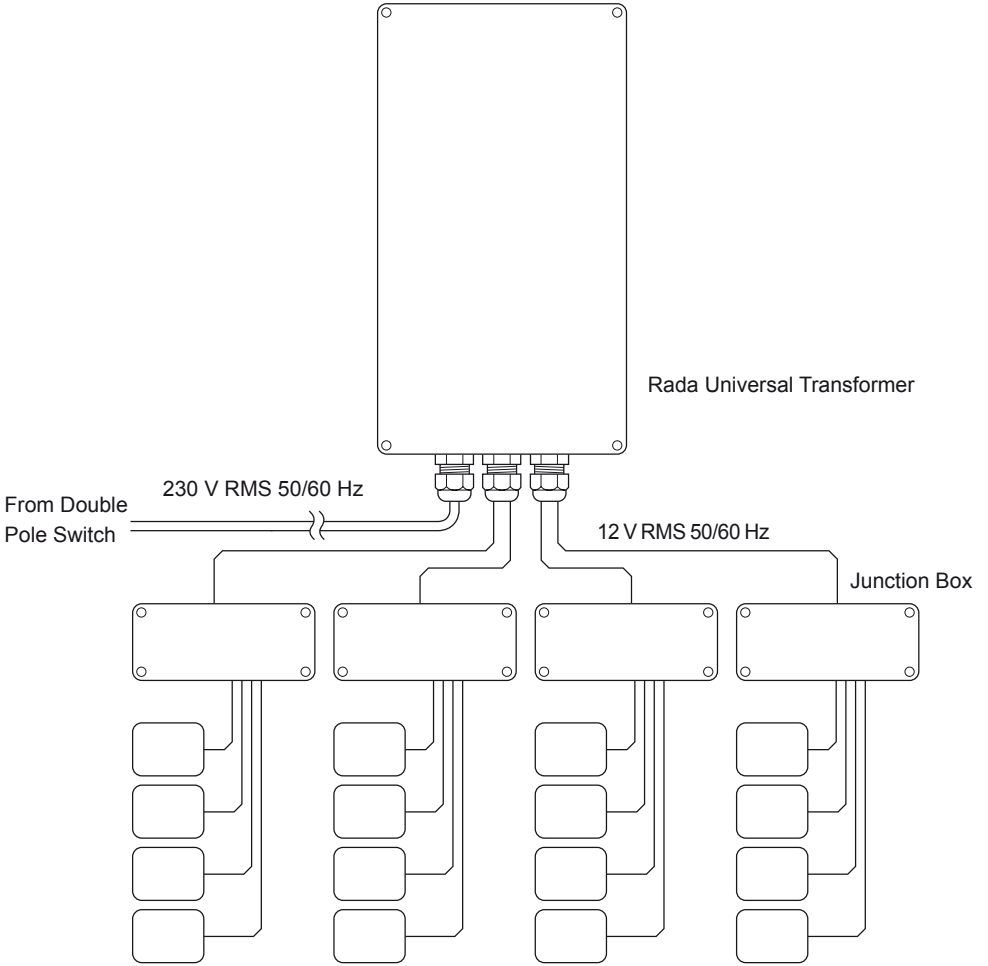
| <b>Distance between the Rada Universal Transformer and the junction box</b> |                         |
|---|-------------------------|
| Maximum cable length (m) <small>Refer to Note 1</small>                     | Size (mm <sup>2</sup> ) |
| 3   | 2.5                     |
| <b>Distance between the junction box and the mono control units</b>         |                         |
| Maximum cable length (m) <small>Refer to Note 2</small>                     | Size (mm <sup>2</sup> ) |
| 2   | 0.5                     |
| 4   | 1.0                     |
| 6   | 1.5                     |
| 10  | 2.5                     |

## Cable connections for the Rada Universal 12 V RMS 50/60 Hz Transformer

**Important!** The output cable sizes and lengths must be carefully selected to prevent excessive voltage drop to the supply for the units.

**Note 1!** Maximum overall diameter of cable 6 mm  $\pm$ 0.5 mm.

**Note 2!** Maximum overall diameter of cable 4 mm  $\pm$ 0.5 mm.



Mono control units (max. 16 pcs.)

| Distance between the Rada Universal Transformer and the junction box |                         |
|--|-------------------------|
| Maximum cable length (m) <small>Refer to Note 1</small>              | Size (mm <sup>2</sup> ) |
| 2.5  | 2.5                     |
| Distance between the junction box and the mono control units         |                         |
| Maximum cable length (m) <small>Refer to Note 2</small>              | Size (mm <sup>2</sup> ) |
| 4  | 0.5                     |
| 8  | 1.0                     |
| 10   | 1.5                     |
| 17   | 2.5                     |

# CUSTOMER SERVICE

## Guarantee

Your product has the benefit of our one year manufacturer's guarantee which starts from the date of purchase.

Within the guarantee period we will resolve defects in materials or workmanship, free of charge, by repairing or replacing parts or product as we may choose.

**This guarantee is in addition to your statutory rights and is subject to the following conditions:**

- The product must be installed and maintained in accordance with the instructions given in this user guide.
- Servicing must only be undertaken by us or our appointed representative. **Note!** if a service visit is required the product must be fully installed and connected to services.
- Repair under this guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date.
- For shower fittings or consumable items we reserve the right to supply replacement parts only.

**This guarantee does not cover:**

- Call out charges for non product faults (such as damage or performance issues arising from incorrect installation, improper use, inappropriate cleaning, lack of maintenance, build up of limescale, frost damage, corrosion, system debris or blocked filters) or where no fault has been found with the product.
- Water or electrical supply, waste and isolation issues.
- Compensation for loss of use of the product or consequential loss of any kind.
- Damage or defects caused if the product is repaired or modified by persons not authorised by us or our appointed representative.
- Routine maintenance or replacement parts to comply with the requirements of the TMV2 or TMV3 healthcare schemes.
- Accidental or wilful damage.
- Products purchased ex-showroom display.

## What to do if something goes wrong

If your product does not function correctly when you first use it, contact your installer to check that it is installed and commissioned in accordance with the instructions in this manual.

If this does not resolve the issue, contact our Customer Services Team who will offer you or your installer help and advice.

If the performance of your product declines, check in this manual to see if simple home maintenance is required. If you require further assistance call our Customer Services Team.

## Technical Helpdesk Service

Our Customer Services Team is comprehensively trained and can offer help and advice, spare parts, accessories or a service visit.

We will need you to have your model name or number, power rating (if applicable) and date of purchase.

As part of our quality and training programme calls may be recorded or monitored.

## Rada Website ([www.radacontrols.com](http://www.radacontrols.com))

From our website you can view our full product catalogue or download a brochure.

## Spares and Accessories

We maintain extensive stocks of genuine spares and accessories and aim to provide support throughout the product's expected life.

Payment can be made by phone at time of order using most major Credit or Debit cards and we aim to despatch orders within two working days.

Items purchased from us are guaranteed for 12 months from date of purchase.

For safety reasons spares exposed to mains voltages should only be fitted by competent persons.

**Returns** – items can be returned within one month of date of purchase, providing that they are in good condition and the packaging is unopened. If you wish to return any items please notify us in writing with seven days of receipt.

## Service / Repairs

Our nationwide team of Service Technicians can carry out all service or repair work to your product within the guarantee period and beyond.

You have the assurance of a fully trained Technician, genuine Rada spare parts and a 12 month guarantee on any chargeable work done.

## Service Contracts

A regular service visit ensures your product continues to perform at the peak of performance. We offer annual or bi-annual servicing carried out by our fully trained technicians subject to site survey.

## To Contact Us - Customer Service and Specification Enquiries UK

Telephone: 0844 571 1777

E-mail: [rada\\_technical@mirashowers.com](mailto:rada_technical@mirashowers.com)

Fax: 0844 472 3076

By Post: Rada Controls, Cromwell Road, Cheltenham, Gloucestershire, GL52 5EP

Rada is a registered trade mark of  
Kohler Mira Limited.

The company reserves the right to alter  
product specifications without notice.



FM 14648

