

# DCS

## LAVA

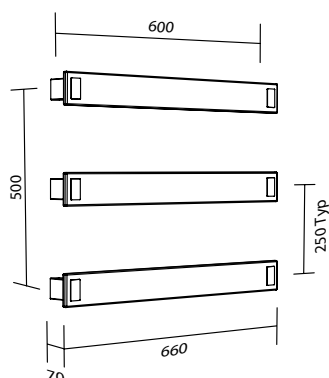
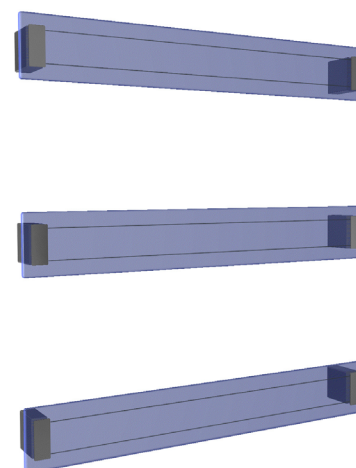


Table 1.0

FEATURES	
<b>Low Voltage</b>	Safe installation in ANY zone
<b>Easy install</b>	ALL wall types, pre-wiring IS required
<b>Any leg cable</b>	Cable can enter left or right
<b>Ecotimer</b>	Ecotimer included (*with transformer kit)

SPECIFICATIONS	
<b>Recommended use</b>	Residential and Commercial
<b>Materials</b>	Clear/tinted glass
<b>Finish</b>	Polished glass
<b>Technology</b>	Dry element (no leaks)
<b>Element</b>	Internal
<b>Options</b>	Heated or Non heated
<b>Power entry</b>	ANY leg, left or right
<b>Voltage</b>	12V AC safety isolating transformer
<b>Wattage</b>	20W
<b>Standards</b>	AS/NZS:60335.2.43
<b>Safety rating</b>	IPX7 (immersion at 1 metre for 30mins )



To see the complete DCS range see [www.dcsshort.com](http://www.dcsshort.com)

### CLEANING RECOMMENDATIONS

This bathroom product should not be cleaned with abrasive materials eg. steel wool/scourers. Do not use any corrosive or abrasive cleaning agents containing acids or scouring agents. Bleaches can also discolour products and therefore should not be used.

Use a soft cloth moistened with warm soapy water or a silicone based household wax/polish such as SC Johnson 'Pledge' for general polishing and cleaning of the appliance. Fine scratching can be removed using the correct metal polish. Recommended brands are 'Autosol' and 'Brasso Paste', both available in tubes from supermarkets and car care outlets.

Damage caused by any improper treatment is not covered by the product warranty- refer to Warranty Conditions on the last page.

Disclaimer: Products in this specification manual must by regulation be installed by licensed and registered trade people. The manufacturer/distributor reserves the right to vary specifications or delete models from their range without prior notification. Dimensions and set-outs listed are correct at time of publication however the manufacturer/distributor takes no responsibility for printing errors.

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## INSTALLATION INSTRUCTIONS

### SAFETY

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

**WARNING:** In order to avoid a hazard for very young children, this appliance should be installed so that the lowest heated rail is at least 600 mm above the floor.

### ELECTRICAL

- Must be installed by a registered electrician.
- The 12V 'safety isolating' transformer supplied must be located in a dry accessible location (do not cover with insulation).
- Distance from transformer to towel rail must be less than 2 metres. see \*FAQ's
- Typical locations include:
  - ceiling cavity
  - wall cavity (behind switch plate)
  - cupboard
- Means for disconnection must be incorporated in the fixed wiring in accordance with wiring guidelines AS/NZS 3000:2000.
- The waterproof wirenut connectors provide an IPX7 rating
- The towel rail may be installed in wet area electrical zones 1, 2 & 3 as specified in AS/NZS 3000:2000.
- Manufactured and tested to AS/NZS 60335.2.43
- Minimum 50 mm clearance to surrounding surfaces.

### 1. WALL PREPARATION

- Lava heated towel rails may be fixed to ANY type of wall, timber stud, steel stud or masonry (solid or cavity). Up to 5 rails can be installed per installation.
- Stud walls (timber or steel) require timber noggs at the correct position for all legs. See table 1.0 for fixing dimensions.
- If the precise position can't be determined early in the job, consider nogging with 18mm construction ply, covering a larger area.
- Be aware that attempting to fix into plasterboard or cement sheeting alone is NOT recommended. Plasterboard (in particular) will not hold long term.

### 2. PRE WIRING

- First determine which side (left or right) you would like the cable to enter the heated towel rail.
- In general, the leg that is closest to the transformer and farthest from wet areas. eg. top left leg if the transformer is in the ceiling and shower is to the right.
- For stud walls drill a 10mm hole in the noggin for the low voltage wiring supplied at the leg position chosen. Typical layout see Fig 1.0 Table 1.0 for fixing dimensions.

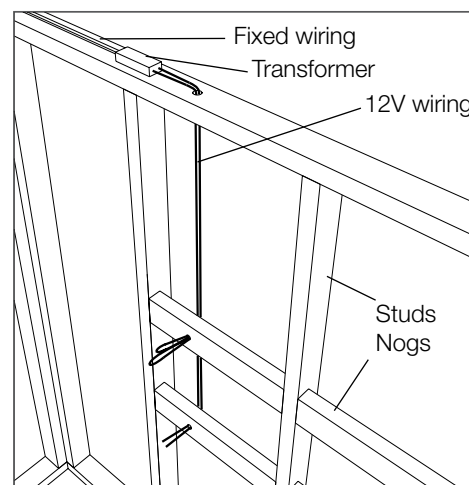


Fig 1.0

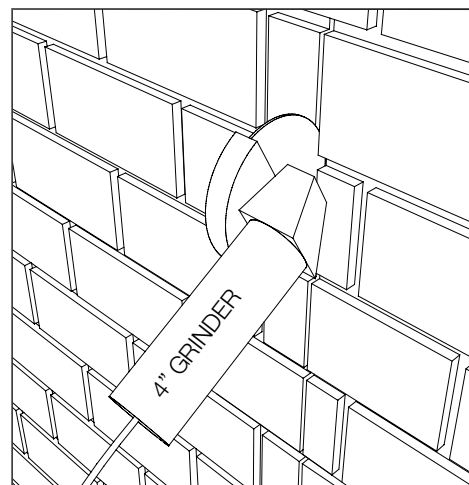


Fig 2.0

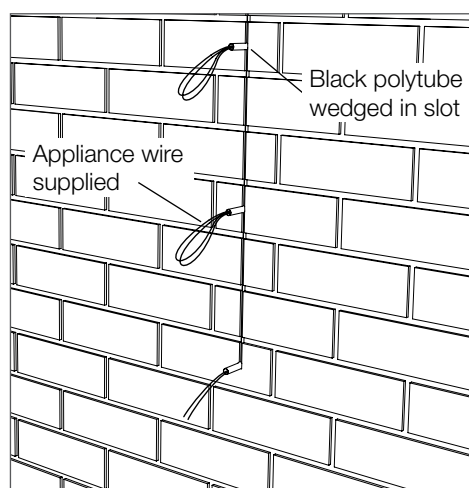


Fig 3.0

## 2. PRE WIRING - CONTINUED.

- For masonry walls using an angle grinder and masonry cutting disc, cut a 25mm deep slot from the cable leg to the eventual location of the transformer, see Fig 2.0
- Place the supplied low voltage wiring in the slot created and render over directly.
- Black poly tube is supplied to locate the wire in the correct position, typically 250mm centres.
- Conduit may also be used but is not essential.
- Low voltage wiring tails should protrude from the finished lined wall approx 150mm to allow for trimming.

## 3. TOWEL RAIL CONNECTION

- The lava glass rails have wiring connected to one side only so depending on which side you have chosen (decided in step 1) the stainless steel legs should be fixed onto the rail so the screw holes on the legs face down.
- Use the towel rail as a guide to determine the correct position for the bushes or use the fixing dimensions in Table 1.0. Use a level to align the bushes before fixing as shown in Fig 4.0.
- Fix the polycarbonate bushes to the wall using the screws provided. DO NOT substitute other screws. In particular, DO NOT use countersunk head screws less than 50mm long.
- Make the electrical connection to the towel rail using the waterproof wirenut connectors provided. See Fig 7.0
- The connectors and excess wiring should be pushed back into the leg of the towel rail.
- If there is a concern that water may enter into the wall cavity, neutral cure silicone sealant may be applied around the cable where it exits the wall lining.
- Finally, fix the towel rail in position using the small stainless steel screws provided. See Fig 5.0
- Note: Drilling a 2mm pilot hole makes it much easier to screw in the self tapping screws. The bushes are moulded from glass reinforced polycarbonate and are very hard.

## 4. TIMER AND SWITCH

- The towel rail must have a switch in the bathroom that can be identified as the towel rail switch. This is typically a separate switch mechanism on the light switch plate for the bathroom. eg. 3 gang switch plate - lights - extractor - towel rail
- The supplied 'ECOTIMER' is a 230 - 240V device that should be installed behind the switchplate between the switch and the transformer. See fig 6.0

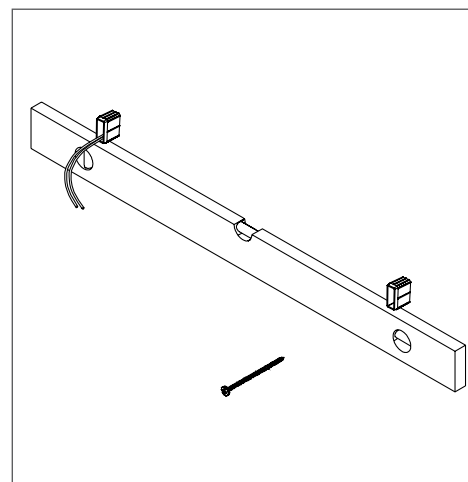


Fig 4.0

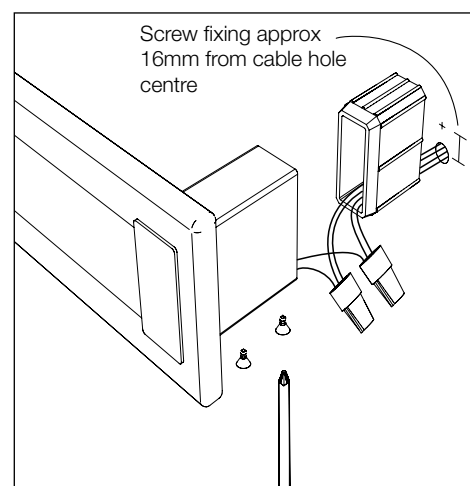


Fig 5.0

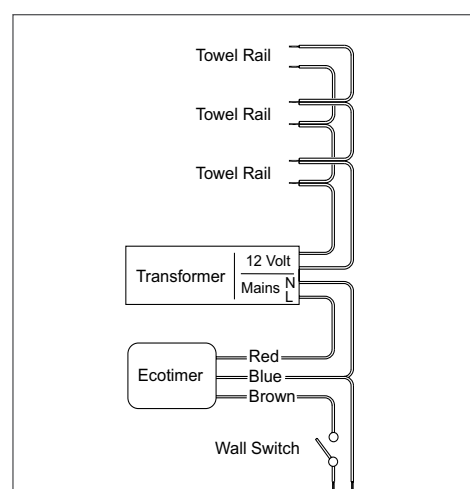


Fig 6.0

### COMPONENT LIST

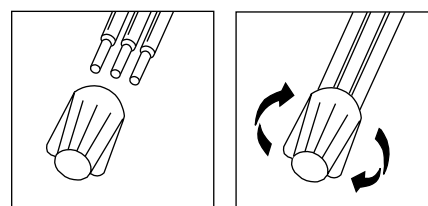
- 1 x Black polytube 40mm
- 4 x Black polytube 5mm, to hold wire in masonry slot
- 3 x Waterproof wirenuts
- 2 x Large zinc plated self tapping screws, pan head 10g x 50mm
- 4 x Stainless steel grub screws, 4g x 1/4" countersunk head
- 2 x Plastic rawl plugs, for installation on masonry walls
- 2 x Black rectangular polycarbonate bushes
- 2 x Stainless steel rectangular legs

### TRANSFORMER KIT (\*TO BE ORDERED SEPARATELY)

- 1 x Ecotimer
- 1 x Electronic transformer
- 2 x 3m lengths 1mm<sup>2</sup> appliance wire 90 deg C

### CORRECT USE OF WATERPROOF WIRENUTS

- Strip wires 12.7mm (1/2").
- Align any frayed strands or conductors.
- Pre-twisting unnecessary. Place stripped wires together with ends of insulation even.
- Twist connector onto wires pushing firmly until hand tight. Do not over torque.
- Wipe sealant in and around conductors and connector opening while tightening. DO NOT REUSE



**Fig 7.0**

### FAQ's

#### Q. Can I place the towel rail more than 2 metres from the transformer?

**A.** The main reason for the limit is NOT voltage drop, as this may be overcome with larger wire. Modern electronic transformers operate at very high frequencies and extending the length of low voltage wiring will cause unacceptable levels of radio frequency interference (buzzing on AM radios). This may not just affect your own home, but potentially neighbours as well, and should be taken seriously. Old technology 'iron core' transformers do not have this problem and may be used to extend longer than 2 metres, provided that larger cable is used to counteract voltage drop. Electricians may contact DC Short Ltd for further technical advice if needed.

#### Q. Is my towel rail operating at the correct temperature?

**A.** Towel rails will not feel as hot on cold winter days as they do on hot summer days as they are not thermostatically controlled. The towel rail contains no moving parts or electrical contacts, this ensures a long life.

A quick test to determine if the rail is functioning correctly follows:

1. Turn the towel rail on and leave for one hour with no towels.
2. After one hour each bar of the towel rail should be a similar temperature, but no more than warm.
3. Cover each bar of the towel rail with a DRY FOLDED towel, three towels (a double layer of towelling on each bar). Leave the towel rail on for another hour.
4. After one hour check that the temperature underneath the towelling on each bar is HOT to the touch. The exposed surfaces should remain warm only.

#### Q. I have tested the transformer with a multimeter prior to installation and detect no voltage?

**A.** Electronic transformers operate at high frequencies, above the sampling frequency of a standard multimeter. It is unlikely that a multimeter will detect any voltage. It should also be noted that electronic transformers will not start without a load connected. If you need to test that the transformer is functioning correctly, EITHER connect the transformer to the towel rail to see if it gets warm, OR temporarily connect a 50W halogen lamp to the transformer to see if it lights up.



### DCS PRODUCT QUALITY GUARANTEE

You have purchased a quality product from DC SHORT LTD ("DCS"). This product is covered by a 7 year replacement product warranty and a 12 month warranty over spare parts and labour.

#### 7 YEAR WARRANTY – DOMESTIC USE

This warranty covers faults in the product construction, material and assembly. Products which are within 7 years from the date of purchase, found upon inspection by DCS, to be defective in construction, material or assembly, will be repaired or exchanged with an equivalent product free of charge. Replaced items become DCS property. All replacement products will be available for collection without charge to the customer at the nearest DCS retailer to the customer's location, or elsewhere as agreed between the customer and DCS.

#### Labour and Spare Parts

The labour for the replacement of products and spare parts to which this warranty applies will be supplied by DCS or relevant supplier using licensed tradesmen engaged by DCS or relevant supplier within 1 year from the date of purchase. Spare parts which are within 1 year from the date of purchase found upon inspection by DCS to be defective in construction, material or assembly, will be replaced free of charge.

#### Manufacturer's Provisions

The following spare parts are covered by a 3 year warranty:

- Heating Elements
- Transformer
- Timer

#### Warranty Conditions

This warranty will apply only under all of the following conditions:

- The item has been installed by a qualified tradesman
- The item has been installed for and subjected to domestic residential use only
- Failure is due to a fault in the manufacture of the product
- Proof of purchase (including the date of purchase) is provided
- The installation of the product is in accordance with the instructions provided

This warranty does not cover products purchased as an ex-display without being fully checked and tested for sale by the manufacturer.

This warranty does not include faults caused by:

- Unsuitable or improper use
- Incorrect installation or installation not in accordance with the instructions provided
- Installation or part installation by the purchaser or any person other than a qualified tradesman
- Normal wear and tear
- Inadequate or complete lack of maintenance
- Chemical, electrochemical or electrical influences
- Harsh detergents or abrasive cleaners used on product finishes

#### 1 YEAR WARRANTY – COMMERCIAL USE

'Commercial' use is all use other than for normal domestic residential purposes, including use in non-business places as in public buildings, schools, sports centres and in establishments that contain private bathrooms with high frequency of use by many individuals, such as hotels, motels, retirement villages and hospitals.

The Commercial warranty covers this product against manufacturing faults in the construction, material and assembly of both the finished products and any spare parts for a period of 1 year from the date of purchase. Products and spare parts which are found upon inspection by DCS to be defective in construction, material or assembly will be repaired or exchanged free of charge. Replaced items become DCS property. The labour for the replacement of products and spare parts to which this warranty applies will be supplied by DCS or relevant supplier using licensed tradesmen engaged by DCS or relevant supplier. The Warranty Conditions and exclusions which apply to the noncommercial warranty also apply to this commercial warranty.

#### EXCLUSIONS

To the fullest extent permitted by law, DCS excludes all liability for damage or injury to any person, damage to any property, and any indirect consequential or other loss or damage.

#### CLAIM PROCEDURE

For all warranty queries customers are to contact the branch where the product was purchased. These details can be found on your purchase invoice.

Our goods come with guarantees that cannot be excluded under the New Zealand and Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.