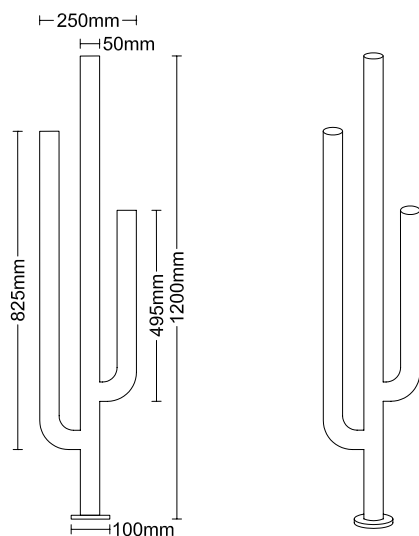


CACTUS

Functional and stylish the DCS range of floor mounted heated towel rails look great next to freestanding baths and compliment any bathroom or ensuite. Towels can be draped or wedged between the vertical tubes. Overall height 1200mm and 50mm round tube profile.



FEATURES

- Low Voltage** Low voltage safe installation in ANY zone
- Easy install** ALL floor types, pre-wiring IS required
- Ecotimer** Ecotimer included (with transformer kit)

SPECIFICATIONS

Recommended use	Residential and commercial	Power entry	Bottom
Materials	Stainless steel 304 grade	Voltage	12V AC safety isolating transformer
Finish	Mirror, Satin and Matte black finish.	Wattage	approx. 80
Technology	Dry element (no leaks)	Standards	AS/NZS:60335.2.43
Element	Internal	Safety rating	IPX7 (immersion at 1 metre for 30mins)
Options	Heated or non heated		

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. **Tech Page Version 3.4**

CACTUS

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.

ELECTRICAL - PLEASE READ BEFORE INSTALLATION

- 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 transformer 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.
- Insulation should be removed from the vicinity of the transformer to a radius of 150mm.
- 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.

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.

WARNING

FIXING INTO THE FLOOR IN A WET AREA CAN COMPROMISE WATERPROOF MEMBRANES. IF YOU ARE CONSIDERING FIXING THROUGH A WATERPROOF MEMBRANE, LIASON WITH THE MEMBRANE INSTALLER IS ESSENTIAL. IT SHOULD BE NOTED THAT THERE MAY BE A NUMBER OF ITEMS IN A BATHROOM THAT MAY BE FIXED TO THE FLOOR, EG TOILET PAN.

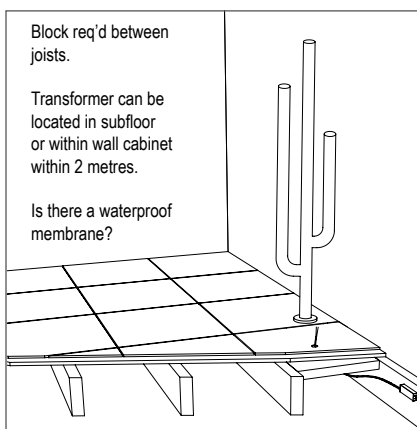


FIGURE 1

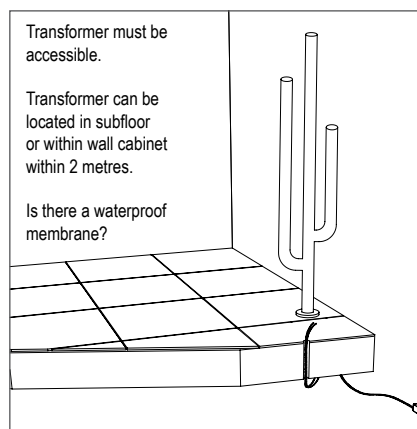


FIGURE 2

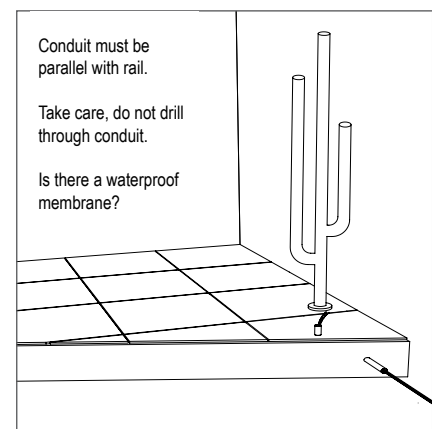


FIGURE 3

ELECTRICIANS please ensure a copy of the installation instructions is left with the end user for future reference.

CACTUS

INSTALLATION INSTRUCTIONS

INSTALLATION SCENARIOS

- Typical wiring for 4 scenarios is shown in **Fig 1.** - Timber floor, **Fig 2.** - Concrete slab floor with drilled hole for wiring, **Fig 3.** - Concrete floor with embedded conduit for wiring, **Fig 4.** - Tiled floor
- Installation in structures other than those shown is possible, provided similar principles are followed. Refer to www.dclshort.com for other installation instructions or contact DC Short Ltd for further technical advice.

1. TIMBER FLOOR INSTALLATION

- The towel rail must be fixed into timber structure below the flooring.
- Fixing into the strip flooring alone will not give sufficient strength.
- Drill a cable hole minimum 12mm diameter.
- Using the towel rail as a guide, mark the positions of the fixing screw holes.
- A pilot hole of 4mm diameter should be drilled in each position through the timber structure.
- Connect the towel rail power cable to the low voltage cable using the waterproof wire nuts.
- **Apply a bead on neutral cure silicone sealant to the floor before fixing.**
- Fix the towel rail to the floor using the stainless coach screws. Finally slide down the cover plates into position.

2. CONCRETE SLAB FLOOR INSTALLATION

- Drill a cable hole minimum 12mm diameter through the slab into the subfloor/ceiling below.
- Using the towel rail as a guide, mark the positions of the fixing screw holes.
- Drill a 8mm hole to a depth of 75mm for the 4 x rawl plugs provided.
- Connect the towel rail power cable to the low voltage cable using the waterproof wire nuts.
- **Apply a bead on neutral cure silicone sealant to the floor before fixing.**
- Fix the towel rail to the floor using the stainless coach screws. Finally slide down the cover plates into position.

3. CONCRETE SLAB FLOOR ,EMBEDDED CONDUIT INSTALLATION

- Embed or trench a 20mm diameter PVC electrical conduit into the slab to accommodate the low voltage wiring.
- Follow the same instructions as scenario 2.

4. TILED FLOOR WITH EITHER TIMBER or CONCRETE BELOW

- For timber under tiles follow the same steps as scenario 1, BUT drill a 8mm hole through the tiling ONLY and a 6mm pilot hole into the timber below.
- For concrete under tiling follow the same steps as scenario 2 and drill the same size holes through the tiling into the concrete below.

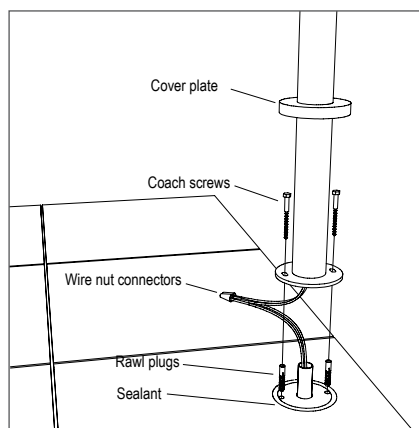


FIGURE 4

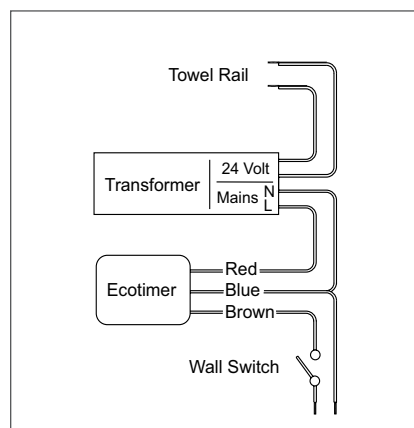


FIGURE 5

ELECTRICIANS please ensure a copy of the installation instructions is left with the end user for future reference.

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COMPONENT LIST

2 x Plastic rawl plugs

3 x Waterproof wire nuts

2 x Large self tapping screws, pan csk head 12g x 65mm

TRANSFORMER KIT *TO BE ORDERED SEPARATELY

1 x Ecotimer

2 x 3m lengths 1.5mm 2 appliance wire 90 deg C

1 x Electronic transformer

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

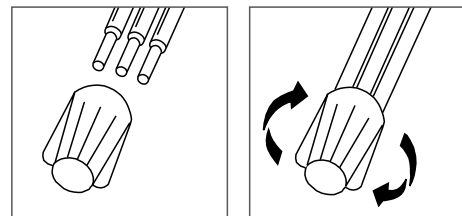


FIGURE 7

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.

ELECTRICIANS please ensure a copy of the installation instructions is left with the end user for future reference.

CACTUS

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.

CACTUS

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 or 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.

