



**NEW “off-white”
heating technology**

Bliss BR “off-white” electric radiant outdoor heaters

Stylish, high-quality heating solutions

Many conventional patio heaters rely on convection heating which works by heating the surrounding air to provide comfort. This can be quite impractical for outdoor and open-indoor areas as there is typically constant air movement which can easily blow away the warmed air. Radiant style heaters transfer heat directly to objects through infra-red waves. While convection heaters heat the air between objects, radiant heaters directly heat the surface of the objects themselves. BLISS electric radiant heaters are more effective within an outdoor or uninsulated indoor area because they provide targeted warmth directly to the people and objects in their path.

- Electric radiant heater perfect for your protected alfresco area, pergola, verandah, garage, café or warehouse
- The elegant, slimline design and “off -white” colour blends in seamlessly with most white ceilings
- Gentle, stylish warmth
- Significantly more cost-effective than bottled gas heaters
- World leading material coating and element technology
- Convenient DIY installation for two models
- Optional mounting brackets and controller
- 2 year residential warranty and 1 year commercial

Subtle, minimalist design

The stylish, slimline black face of the BLISS does not emit light or glow when in use, blending elegantly into your décor. Ceiling, wall and umbrella mounting options ensure that your valuable floor and table space is not wasted.

Efficient, cost effective electric heating

The innovative design of the BLISS enables comfortable and even heat dispersion from the heater surface with minimal operating costs.

Design flexibility

Three BLISS models are available, ensuring the heating requirements of any undercover outdoor or open indoor area is possible. Brackets for direct ceiling or wall/ceiling angled mounting are supplied as standard.

Optional BLISS accessories include beam or fixed umbrella mount brackets, extension mount brackets, chain suspension brackets and flush mounting enclosures.

Minimal maintenance

The BLISS incorporates no internal moving parts ensuring quiet and virtually maintenance free operation.

Australian Product

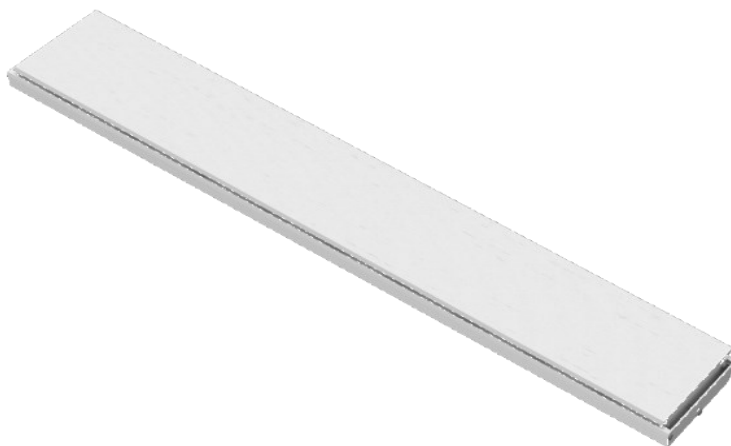
Designed, engineered and assembled in Australia the BLISS is fully backed by a 24 month residential warranty, and 12 month commercial warranty.

Stylish design— *The Heater that is a Design Feature!*

The attractive BLISS comes with an attractive white off-white face and rear casing to match many ceiling and wall installations.

Easy to use

The BLISS is controlled by a simple on/off operation, either when plugged directly into a power point, or hard-wired via a wall mounted on/off switch. The unit takes approximately 15 minutes to heat up to maximum temperature and approximately 30 minutes to cool down, depending upon the ambient temperature. Please don't forget to turn it off. We recommend installing your BLISS with a timer controller to ensure the unit is turned off after a pre-set time. Thermofilm recommends Model TT-MTM controller, which includes a timer function and temperature control functions.



Specifications

Rev A Jul16

MODEL	POWER (WATTS)	CURRENT (AMPS)	DIMENSIONS (mm)	WEIGHT (Kg)	LEAD LENGTH (mm)	PLUG
BR975WH	1800	7.5	974x 170 x 48.5	4	1000	YES
BR1195WH	2400	10	1204 x 170 x 48.5	7	1000	YES
BR1805WH	3600	15	1804 x 170 x 48.5	9	1000	NO

MODEL

HEATER TYPE High intensity electric radiant overhead heater with high surface area profiled alloy

OUTPUT Refer to model code chart above

POWER 230-240 Volts Nominal at 50—60 Hertz, Single Phase

CONNECTION 3 Core Cable 2.5mm²

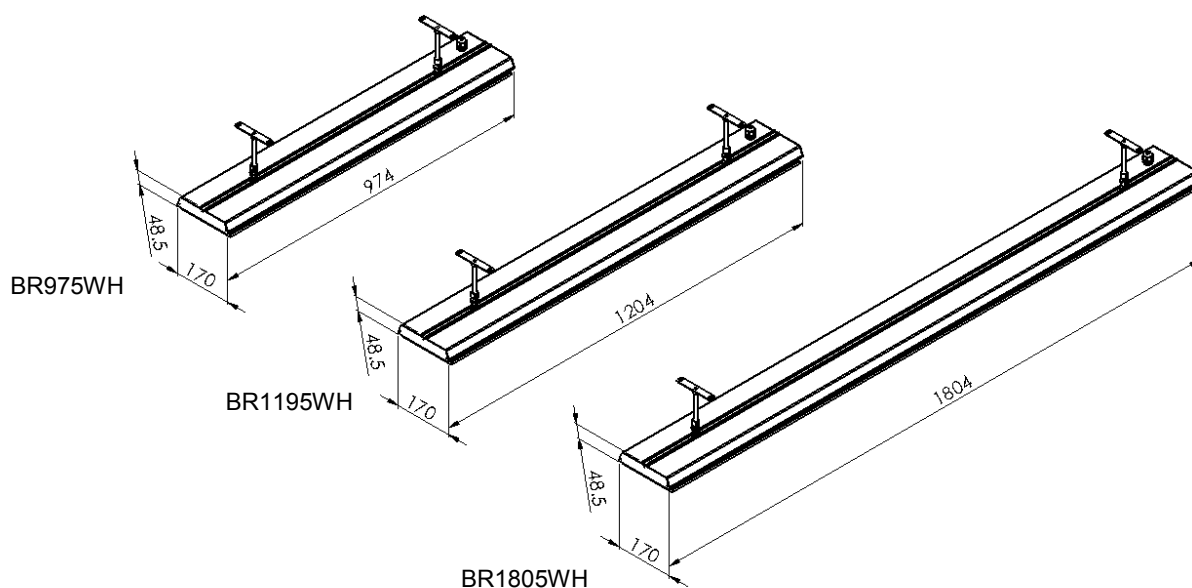
APPROVALS AUSTRALIA/NZ

MOUNTING HEIGHT
 MINIMUM 2.1 m
 RECOMMENDED 2.3 m to 2.5 m
 MAXIMUM 2.7 m in a fully enclosed outdoor area (For higher ceiling heights, units can be lowered using optional bracket kits or refer to the Heatstrip Max range)

MOUNTING OPTIONS Suitable for ceiling, wall, beam, fixed umbrella and recess mounting. Also available for extension mount using rigid fixing poles and chain / wire mounting

PROTECTION RATING IP55 Protection from water ingress from all directions

COUNTRY OF ASSEMBLY Australia



Operating cost comparison

In many instances, patio heaters powered by gas bottles are used as an outdoor heating source. The below table shows the operational cost comparison between BLISS and a bottled gas patio heater. Not only are the hourly running costs considerably less with BLISS, but you never have to worry about running out of gas, no refilling, no unattractive gas bottle to waste space; and BLISS looks stylish and subtle.

RUNNING COST	OUTDOOR GAS HEATER	BLISS ELECTRIC RADIANT HEATER		
		BR975WH	BR1195WH	BR1805WH
PER HOUR	\$2.78/hr	\$0.45/hr	\$0.60/hr	\$0.90/hr
PER YEAR	\$500.40	\$81.00	\$108.00	\$162.00

Notes:

- Calculations of hourly running cost for outdoor gas heater is based on \$25.00 average to fill a 9kg gas bottle and average running time of 9 hours. $\$25.00 / 9 \text{ hours} = \2.78 per hour
- Electricity rate of 25.0 cents/kWh
- All calculations are excluding GST.
 - $1.8\text{kW} \times 0.25 \text{ cents} = \$0.45 \text{ or } 45 \text{ cents per hour}$
 - $2.4\text{kW} \times 0.25 \text{ cents} = \$0.60 \text{ or } 60 \text{ cents per hour}$
 - $3.6\text{kW} \times 0.25 \text{ cents} = \$0.90 \text{ or } 90 \text{ cents per hour}$

Calculations of yearly running cost are based on 180 hours usage

180 hours x \$2.78 = \$500.40 yearly running cost for outdoor gas heater

180 hours x \$0.45 = \$81.00 yearly running cost for 1800W BLISS BR975WH

180 hours x \$0.60 = \$108.00 yearly running cost for 2400W BLISS BR1195WH

180 hours x \$0.90 cents = \$162.00 yearly running cost for 3600W BLISS 1805



Spot heating principle

In most outdoor or difficult-to-heat indoor applications, there are 2 options when determining at the size and quantity of heaters required.

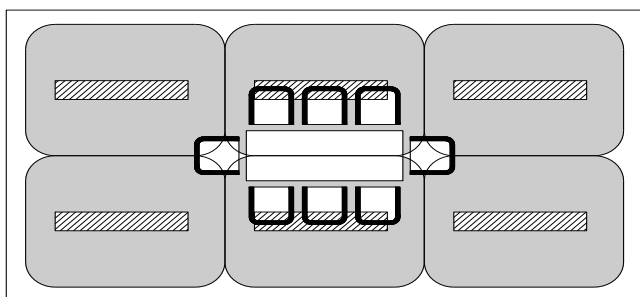
Option 1 is to comfort heat the entire area based on the total dimensions of the space, regardless of whether the entire area is being fully occupied.

Option 2 is to spot heat the high use areas, such as over outdoor tables, BBQ's, lounges, assembly lines or indoor workstations.

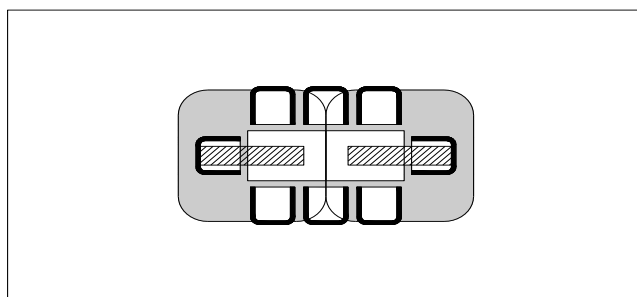
Often it is more practical and efficient to spot heat high use areas. Spot heating will reduce both the initial capital cost as well as the ongoing running costs. Spot heating will allow the area to be “zoned”, meaning only the areas that are being used are heated, such as tables in a restaurant or outdoor alfresco area.

Option 1 and 2 show a comparison between heating an entire area or spot heating over a table.

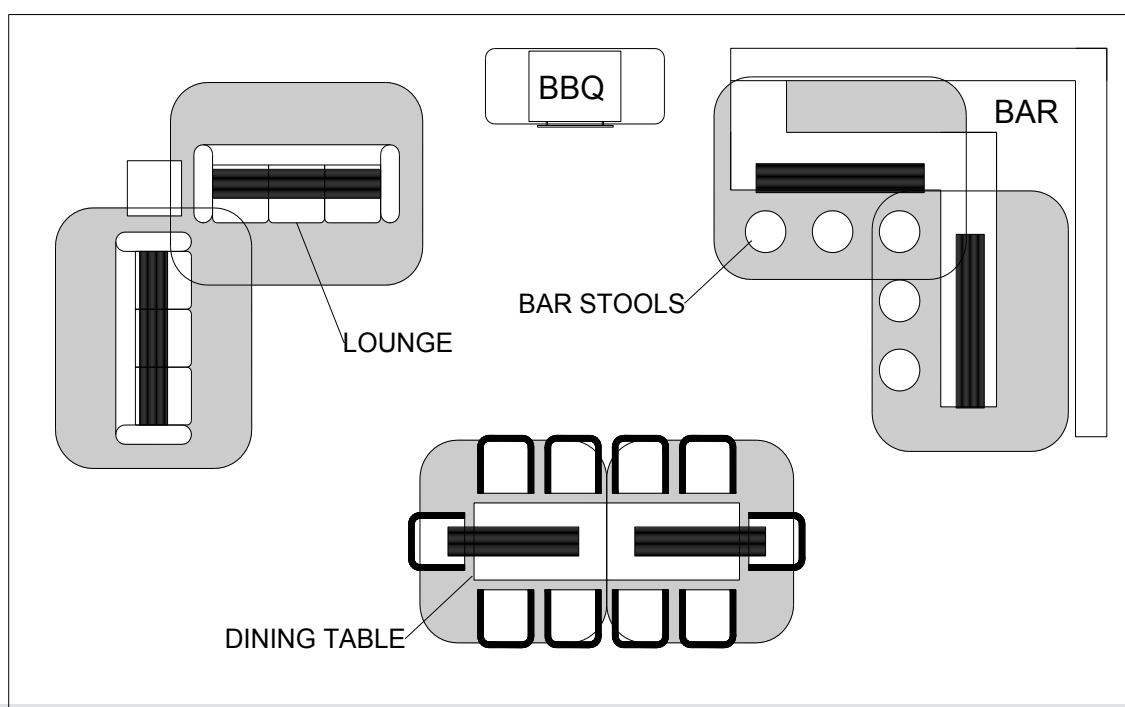
The bottom layout shows the flexibility of using BLISS to provide a comfortable environment, even when the layout of the area is very unusual.



Option 1: 6 x BR1195WH



Option 2: 2 x BR1195WH



Radiant footprint

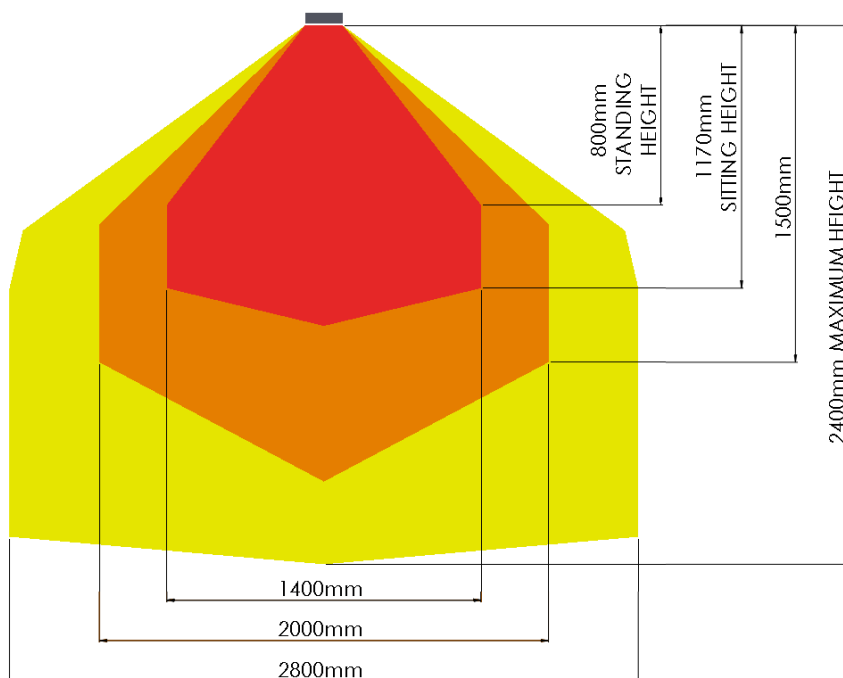
BLISS electric heaters produce radiant heat which heats objects rather than the air. Therefore, it is imperative that objects to be heated (ie. people), are within the direct radiant footprint of the heater.

The diagram to the right shows the radiant footprint of BLISS and is an approximate guide based on a fully enclosed outdoor environment.

This diagram shows that the maximum heat output is found directly under the heater, and the temperature decreases as you move away from the heater.

It highlights the importance of maintaining recommended mounting heights, and if possible, positioning the heater directly above the area to be heated.

Note that the temperature is similar for all 3 models, regardless of the wattage however, as the size increases and the length of the unit increases, the radiant footprint will be longer.

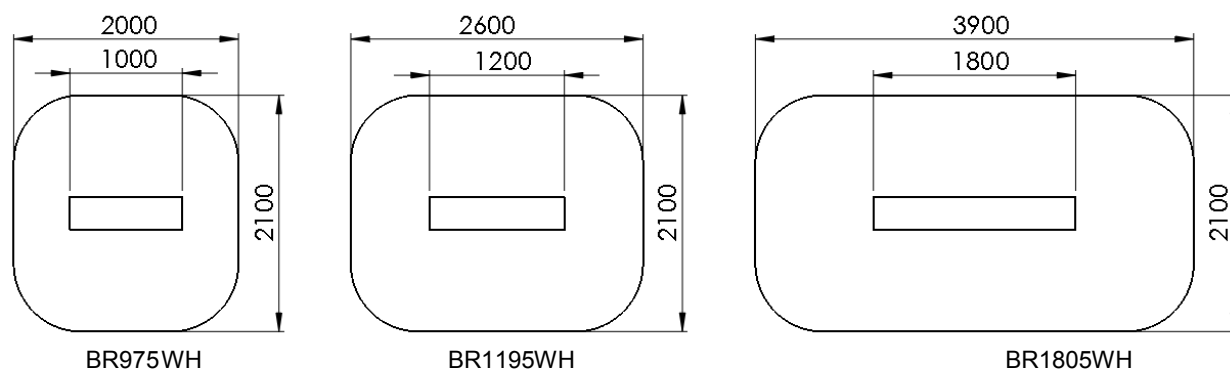


The below diagrams show the approximate heating area for each model, based on both an indoor and outdoor enclosed environment, with direct overhead mounting.

The radiant footprint is reduced in angled and wall mounted installations.

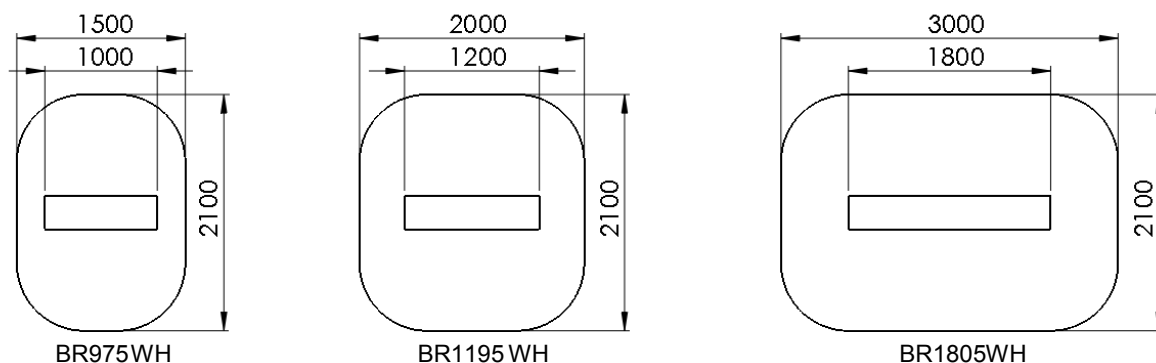
HEATED AREA

INDOOR SPOT HEATING



HEATED AREA

OUTDOOR ENCLOSED HEATING



Selection guide

General recommendations for **BLISS Electric Outdoor Heaters**:

- Ideal mounting height: 2.3m to 2.5m. Maximum is 2.7m in a fully protected/enclosed outdoor environment.
- Ideal mounting location: ceiling mounted, directly above area to be heated (eg. above a table)
- Minimum recommended heating capacity for various installations are: 400W/m² for indoor spot heating; 500W/m² for protected outdoor areas, and 600W/m² for exposed outdoor areas. To ensure the heater provides satisfactory performance, Thermofilm strongly recommends using conservative coverage areas when specifying how many heaters are required for each installation.

The table below outlines the *maximum* coverage of each **BLISS** model based on 3 different scenarios with direct overhead mounting at minimum installation height. For example, for an outdoor area that is protected from prevailing winds by walls, café blinds etc, Model BR975WH will cover a *maximum* of 3.6m² and Model BR1195 will cover a *maximum* of 4.8m².

For angled wall mounting applications, the coverage is reduced by up to 40%.

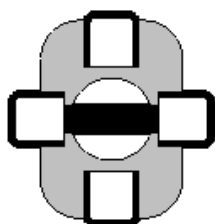
MODEL	INDOOR PROTECTED (m ²)	OUTDOOR ENCLOSED (m ²)	OUTDOOR EXPOSED (m ²)
BR975WH	4.5	3.6	3
BR1195WH	6	4.8	4
BR1805WH	9	7.2	6



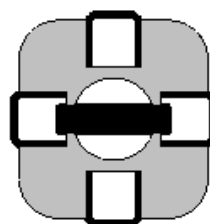
Table layout

For the majority of outdoor applications, the most effective method is to spot heat a table or similar area. The diagrams below provide an easy selection guide for the approximate model and quantity of heaters required to heat common residential table settings.

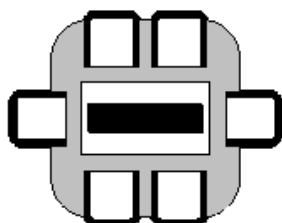
Selections are based on BLISS being mounted at 2.4m from the floor in a fully enclosed undercover outdoor area.



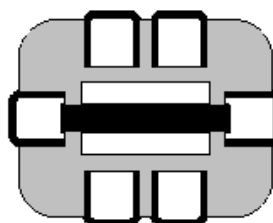
BR975WH



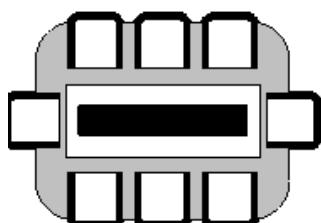
BR1195WH



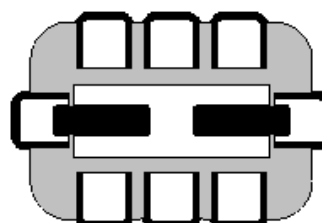
BR1195WH



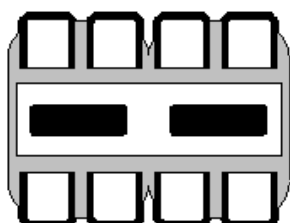
BR1805WH



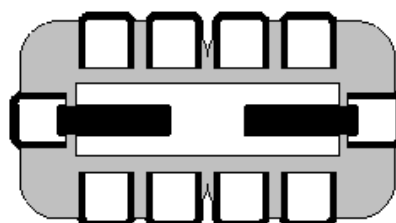
BR1805WH



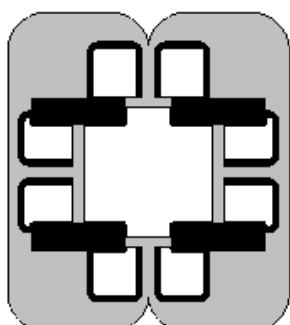
2 x BR975WH



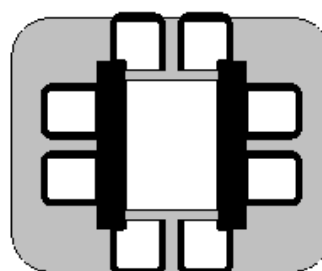
2 x BR975WH



2 x BR1195WH



4 x BR975WH



2 x BR1805WH

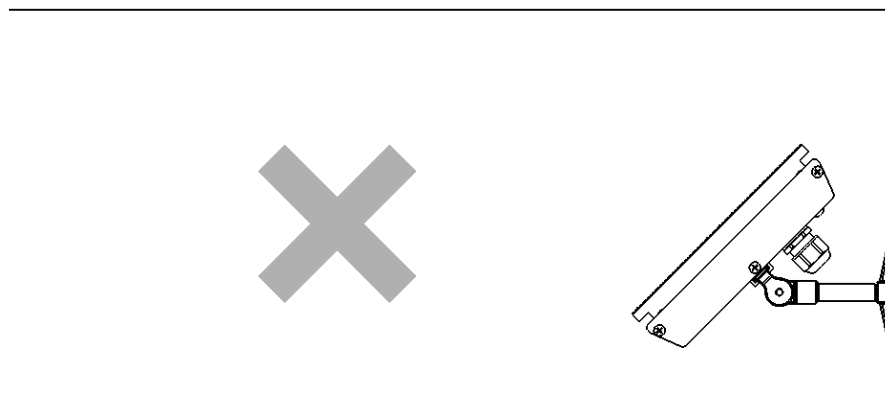
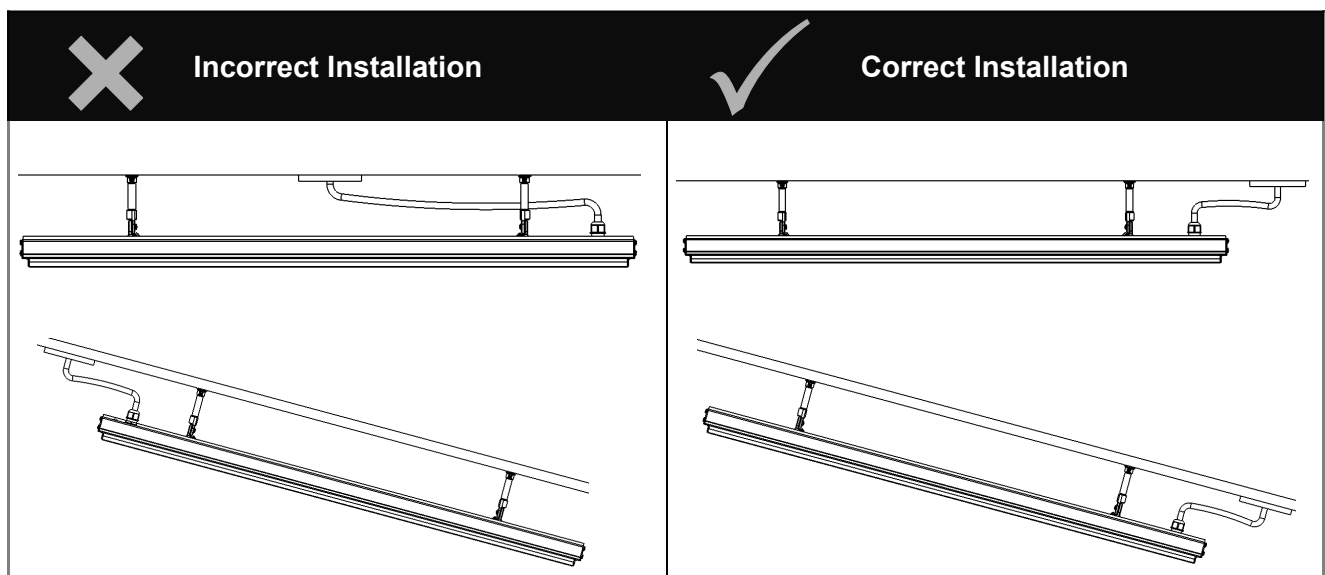
Installation Requirements

The ideal mounting position for the BLISS heater is on the ceiling directly above the area to be heated. If this is not possible, BLISS can be mounted on a wall and angled downwards. In this situation, ensure the mounting height is in the range of 2.1m to 2.7m and the table is close to the wall.

For mounting heights more than 2.7m, we recommend the use of the optional accessories to reduce the height of the heater to 2.3m—2.5 m. This will increase the effectiveness of your heater. Refer to the Mounting Accessory section for more information.

Electrical connections/GPO's should not be located at the back of the heater. They should be located outside the physical heater to minimize heat build-up behind the product.

If the heater is to be mounted on an incline (e.g. vaulted ceiling), ensure the electrical connection is located at the lowest point of the heater.

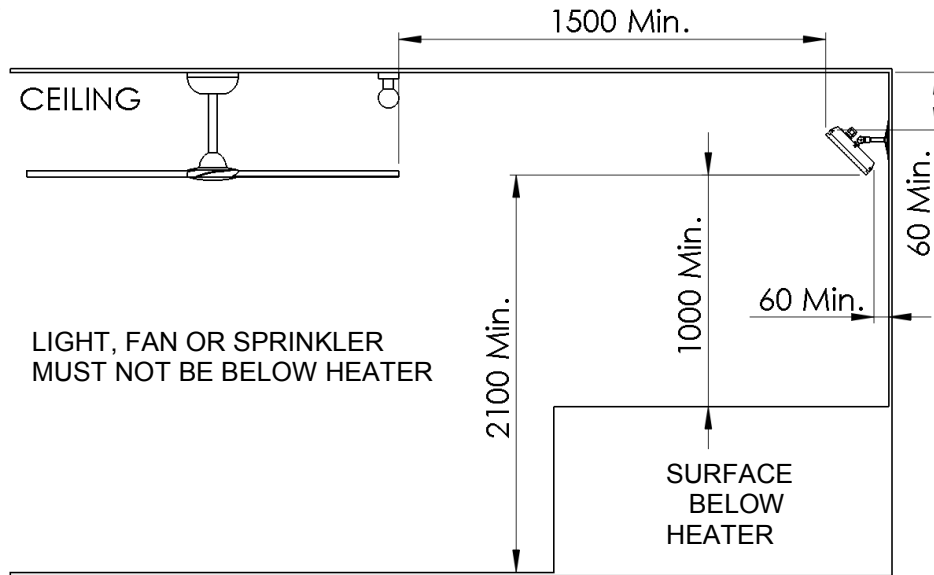


The heating surface must never be directed toward the ceiling

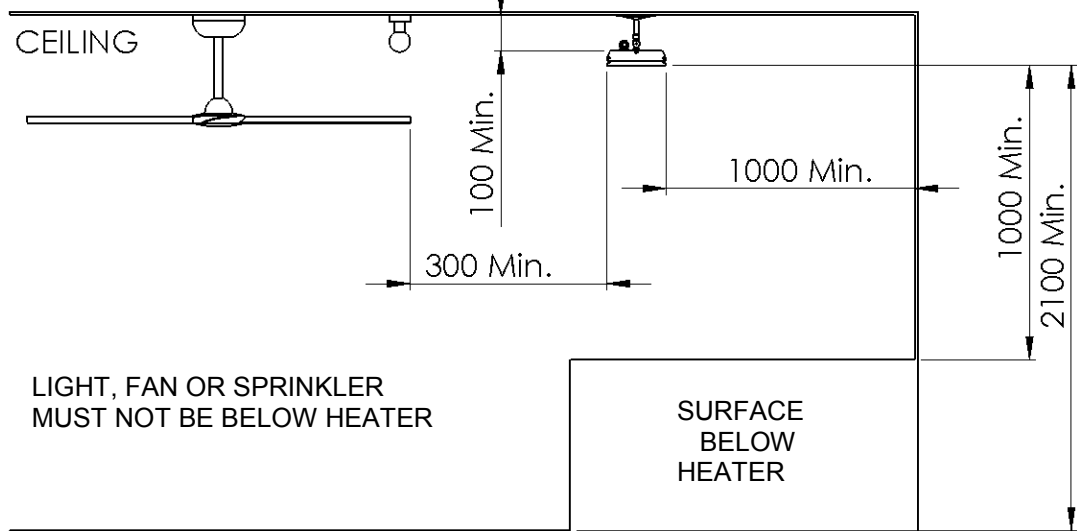
Installation location —the diagrams below provide the minimum recommended clearances (in mm).

WARNING: This heater is not equipped with a device to control the room temperature. Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.

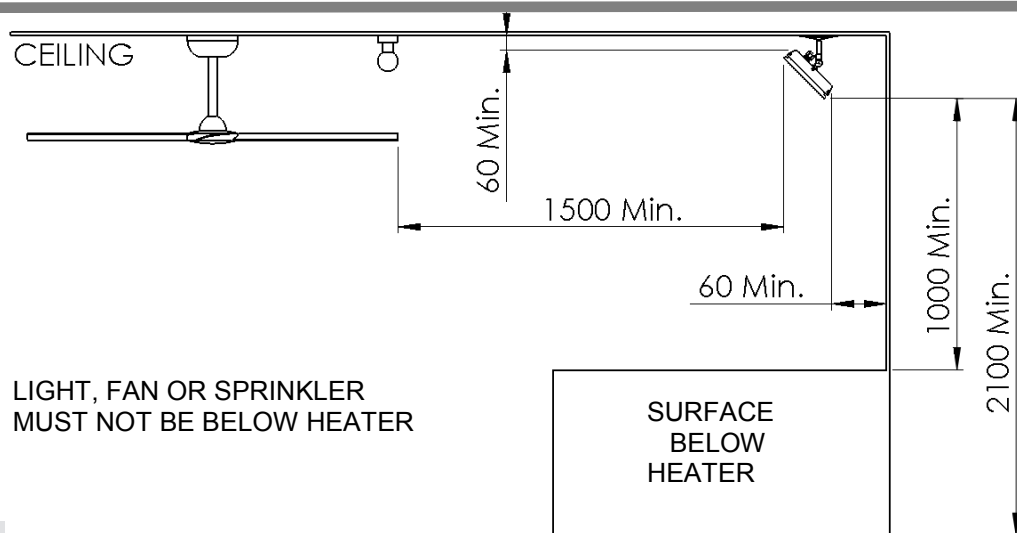
Angled Wall Installation



Ceiling Installation



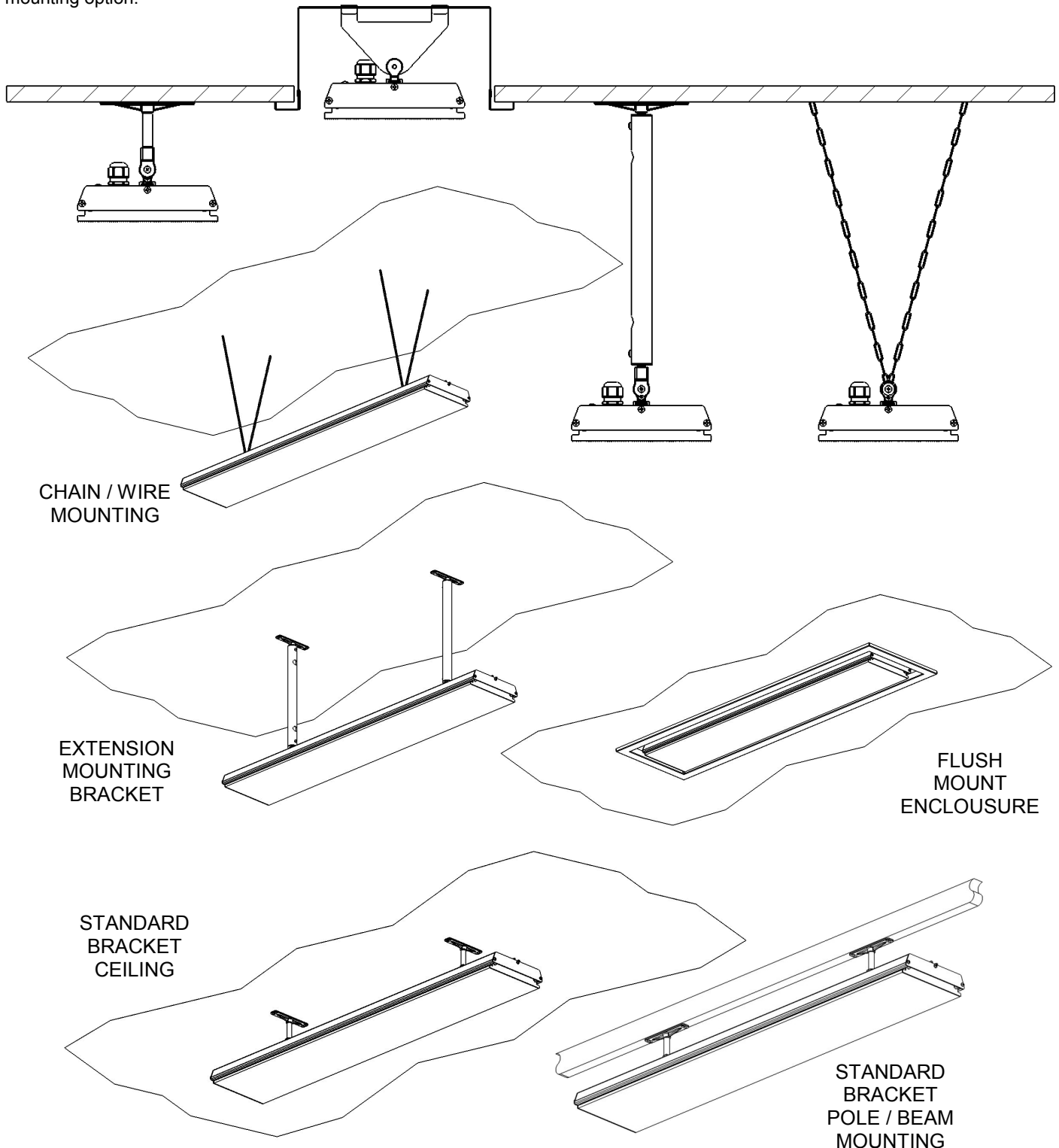
Angled Ceiling Installation



Mounting options

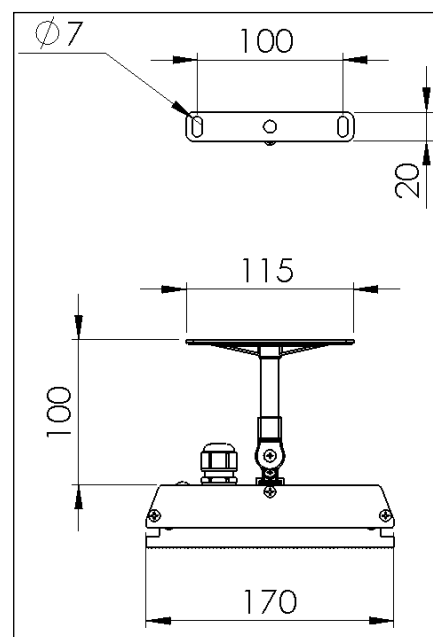
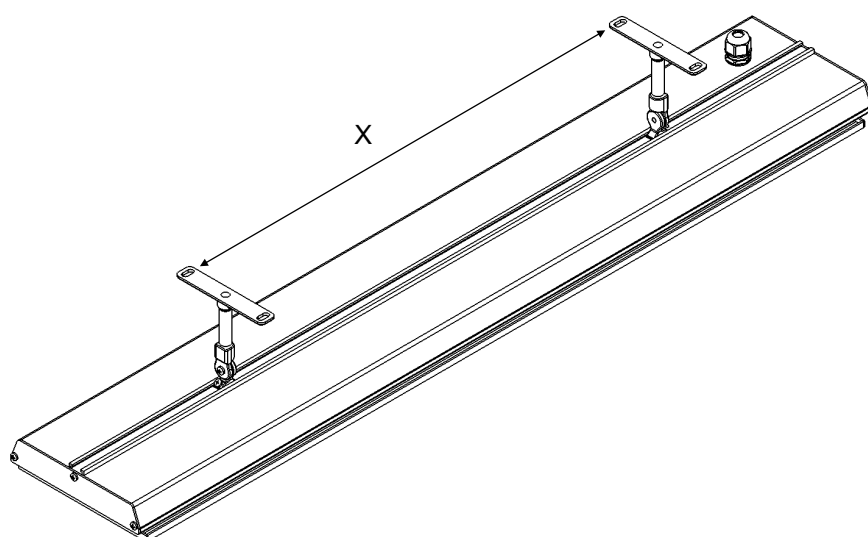
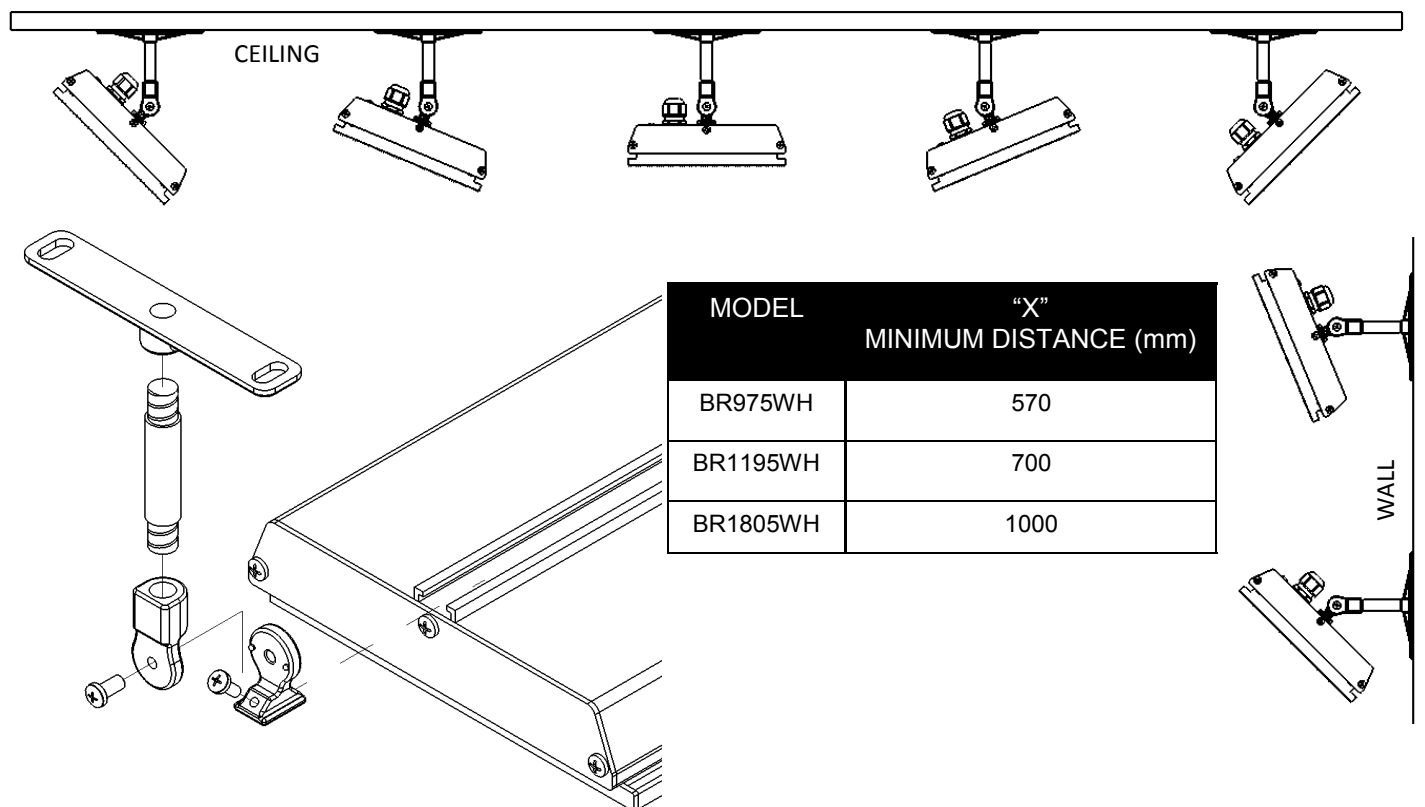
Installing the BLISS heater is simple and easy using the standard mounting brackets supplied. For other irregular locations, there are range of mounting options available - refer to diagrams below

BLISS heaters can be mounted directly to the ceiling, angled downwards on a wall, fitted flush with the ceiling, attached to beams or poles or suspended by rods, wires or chain . Refer to the following pages for more detailed information on each mounting option.



Standard mounting brackets

BLISS heaters come with a pair of standard mounting brackets. These adjustable brackets allow direct ceiling, wall or pole/beam mounting, and come with preset angle options of parallel, 22.5° and 45°.



PART No	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS
ZBRAK-110	125 x 150 x 40	0.2	ALLOY

Flush mount enclosure

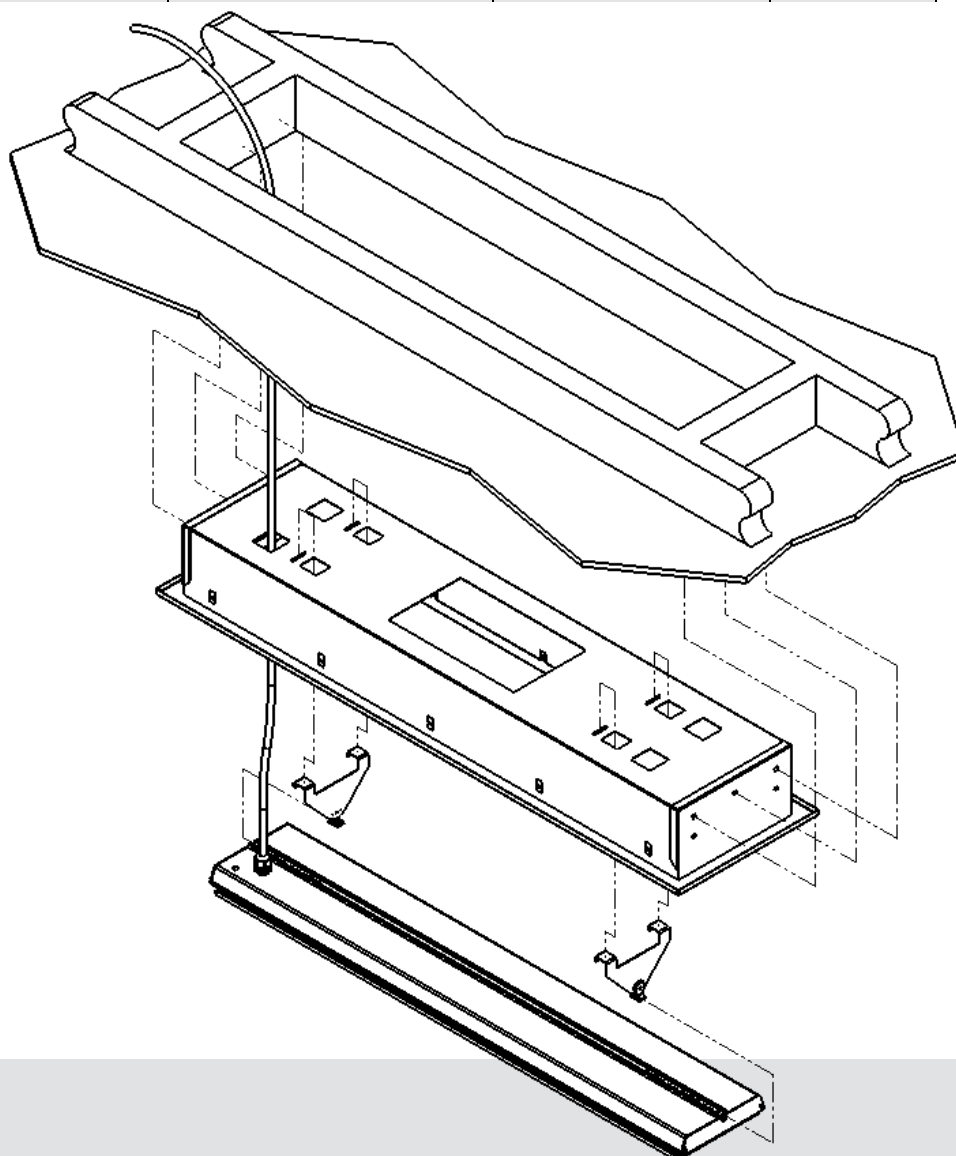
The Flush Mount Enclosure is an ideal way to neatly install the heater into a ceiling. They are available for all BLISS models, and are supplied as a one-piece unit suitable for mounting individual heaters. Flush mounting can be used with plaster or timber lined ceiling materials.

An ideal mounting height is 2.3m-2.5m, above floor level with a maximum ceiling height of 2.7m in an outdoor enclosed environment. Maximum mounting heights should be strictly followed, otherwise the performance of the units will be reduced.

A minimum clearance of 50mm behind the enclosure must be provided.

The enclosure is manufactured from powder coated steel.

SUITABLE FOR MODEL	PART No	HOLE CUTOUT DIMENSIONS (mm)	OVERALL DIMENSIONS (mm)	WEIGHT (kg)
BR975WH	THEAC-040	1030 x 240	1080 x 290 x 125	6
BR1195WH	THEAC-041	1260 x 240	1310 x 290 x 125	8
BR1805WH	THEAC-042	1860 x 240	1910 x 290 x 125	9



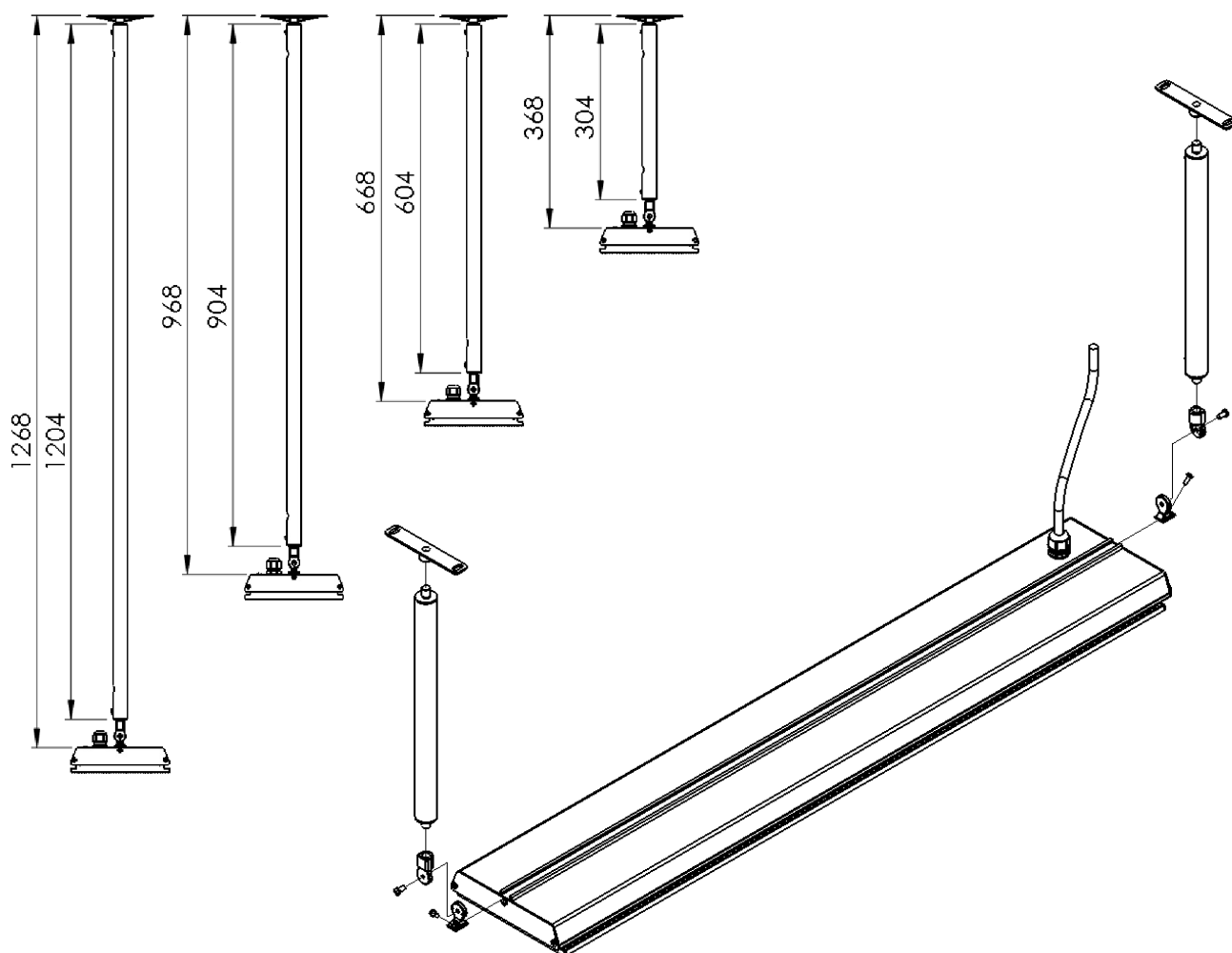
Extension Mount Bracket

The Extension Mount bracket allows BLISS heaters to be lowered from high ceilings using rigid connections. The standard length options are 300mm, 600mm, 900mm and 1200mm.

The kits include all brackets, poles and screws necessary for connection to the heaters, however it does not include screws for attachment to the ceiling.

The extension mount bracket utilises component from the standard bracket kit which is supplied with each heater. For minimum distance requirements between poles please refer to page 14.

*screws to ceiling are not included.



PART No	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS	NOTES
THEAC-044		0.21	6060 AL	Kit includes 2x300mm extension pole, screws and bracket adaptors
THEAC-044		0.38	6060 AL	Kit includes 2x600mm extension pole, screws and bracket adaptors
THEAC-045		0.55	6060 AL	Kit includes 2x900mm extension pole, screws and bracket adaptors
THEAC-046		0.71	6060 AL	Kit includes 2x1200mm extension pole, screws and bracket adaptors

Safety

BLISS heaters has an IP rating of 55. This means it is safe for water ingress from all directions. The heaters can be safely hosed down.

Heaters have undergone extensive testing both in laboratory conditions, in Thermofilm's manufacturing facility in Melbourne and field trials in Australia and overseas. It is this testing that gives the purchaser the confidence of a high quality product. Independent laboratory testing has confirmed Thermofilm's full compliance with Australian and other International Standards including CE, AS/ANZ, UL/CSA

BLISS is Class 1 equipment and must be earthed.

In operation, this heater is VERY HOT— do not touch any part of the heater while it is turned on. Do not touch any part until 30 minutes after it is turned off.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or intellectual 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 they do not play with the appliance.

WARNING: This heater is not equipped with a device to control the room temperature. Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.

Do not allow any cables, furnishings, flammable materials or other items come in contact with any surface of the heater.

If installed in wet areas, the heater switches or controls must be located so that they cannot be touched by persons in the bath or shower.

The heater needs to be installed as per the installation instructions paying special attention to the minimum clearances. The heater needs to be mounted on a rigid bracket or fixing.

The heater must not be mounted immediately below or in front of a socket outlet.

The heater comes in both plug (1800W & 2400W) and hardwired (3600W) versions. In both cases the fixed wiring must be installed by a licensed electrician in accordance with the relevant wiring regulations. Provision for disconnection must be incorporated into any fixed wired heater installation.

The supply cord can not be replaced. If the supply cord is damaged the appliance shall be scrapped or returned to the point of purchase for return to Thermofilm.

Maintenance

BLISS heaters are made from durable materials, however regular care and maintenance of your heater will help prolong the life of the heater.

It is recommended that you clean the heater with a soft cloth gently wipe the surfaces of the heater with a mild detergent to remove the built up contaminants from the environment. Then rinse all detergent off the heater.

All chemicals in the atmosphere including cigarette smoke, pollution etc. will tarnish the surface of the heater. In this case, additional cleaning and maintenance may be required. Carrying out the cleaning process at least every three months will reduce the amount of build up and keep the product in good condition. If the heater is in a corrosive environment (eg. salt spray), we recommend that you clean your heater with a light spray of fresh water every week. After cleaning, turn the heater on for 20 minutes to dry any water residue and prevent water staining.

Before cleaning or inspection activity, the heater must be switched off and cooled down completely.

Do not use any abrasive materials or products to clean the heater, this includes solvents, citrus based cleaners or other harsh cleaning products.

When handling the heater, ensure that your hands are clean or that you use clean gloves as grease or dirt can mark the surface of the heater.

Do not use high pressure water to clean heaters.

Wall Mounted Controller with Remote

For hardwired installations BLISS radiant heaters can be controlled via a simple on/off wall mounted switch, however it is recommended to use a controller with a multiple heat setting and a timer, to give the best performance and lowest running cost. This controller is optional, not mandatory.

TT-MTM2 Wall Controller

This controller is a custom designed and manufactured controller for Thermofilm heaters. It has been designed for ease of use and to provide low running costs of your heater. It provides both temperature control (allowing the user to turn the heat output up or down depending on the ambient temperature and conditions) and a timer for automatic heater shut-off operation.

The timer function has four settings: 1 hour, 2 hours, 4 hours or constantly on. This feature is ideal for applications such as BBQ, alfresco areas, restaurant dining, assembly line production etc. when continuous heat is not required. The timer also reduces the likelihood of heaters being inadvertently left turned on.

Depending on the ambient temperature there may be a requirement to adjust the heat output of the heater. The controller has 3 settings, they are High, Medium and Low.

The controller allows a combination of the multiple timer (1/2/4 hour) and heat outputs (High/Medium/Low).

The controller comes with a remote control unit which provides convenient control of the heater power output and timer functions.

Controlling multiple heaters

It is possible to use one wall controller to control multiple heaters. The wall controller is rated at 16 Amps and 240 volts. For a larger current draw, talk to your electrician who can use a relay to connect more units.

Remote pairing

All units operate using the same remote control frequency, therefore, multiple wall controllers can be operated using a single remote control.

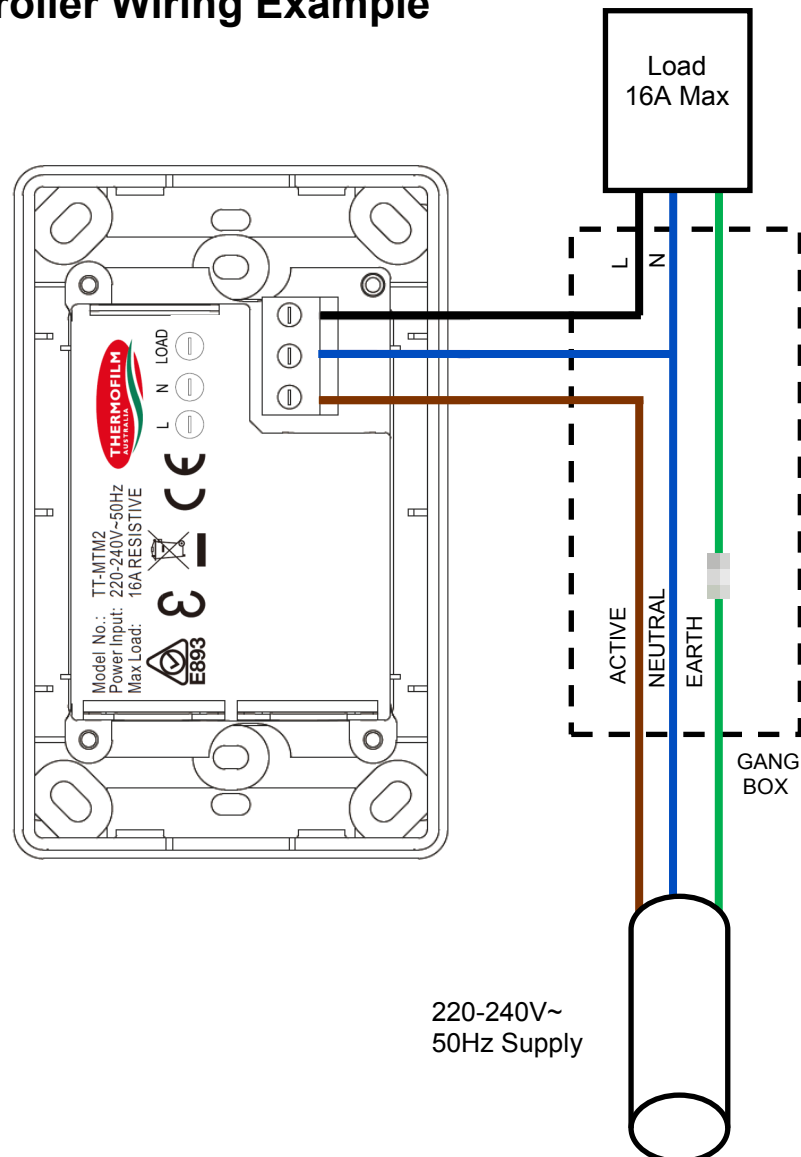
The remote will function at distances up to 8m when used in a straight line. This distance reduces when used at an angle.



MODEL	MAXIMUM VOLTAGE (Volts)	MAXIMUM CURRENT (Amps)	PACKAGED DIMENSIONS (mm)	UNIT WEIGHT (kg)
TT-MTM2	240	16	150 x 95 x 55	0.3

TT-MTM CONTROLLER INSTALLATION GUIDE

Controller Wiring Example



The TT-MTM2 controller requires sufficient air circulation in order to provide continuous operation on the high power load setting. The vents must remain clear at all times; never block or cover the vents.

An ideal controller installation will provide significant space around the back of the controller. Installing into restricted spaces, such as brick walls, may result in overheating if adequate ventilation is not provided.

Heater wiring schematic diagrams

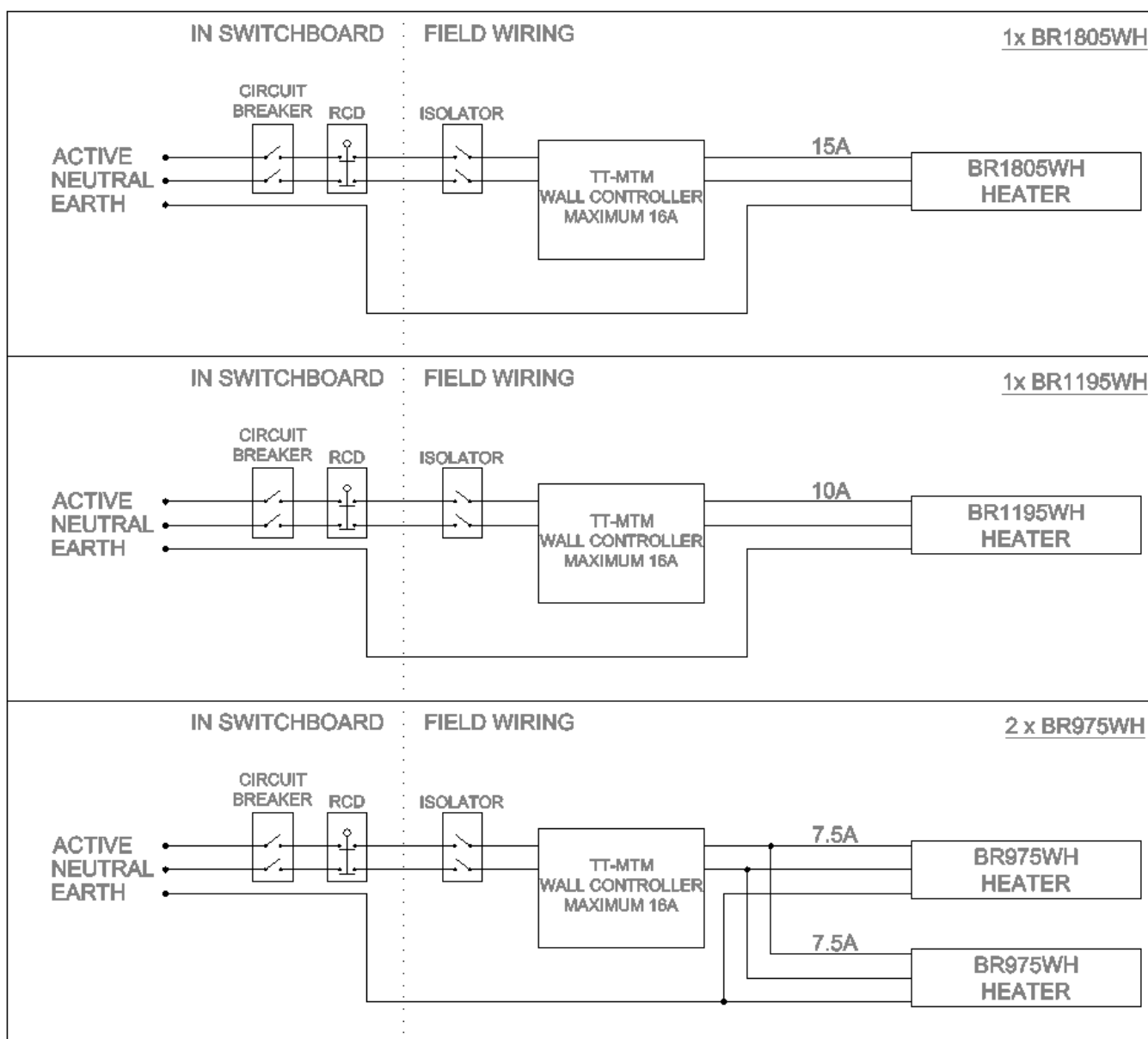
It is recommended to install an ON/OFF isolation switch before the controller and ensure the unit is turned OFF after use.

Multiple heaters can be operated using a single controller, however the maximum current rating of 16A must not be exceeded. For direct wiring to the controller, the maximum is generally one heater unit unless the combined maximum current is less than 16A. For example, 2 x BR975WH can be connected directly to the controller.

Below are example circuits indicating potential installation configurations.

Always check with your electrician and ensure all wiring is in accordance with local regulations.

For multiple units from one wall controller, it is recommended to talk to your electrician who will use a relay or contactor.



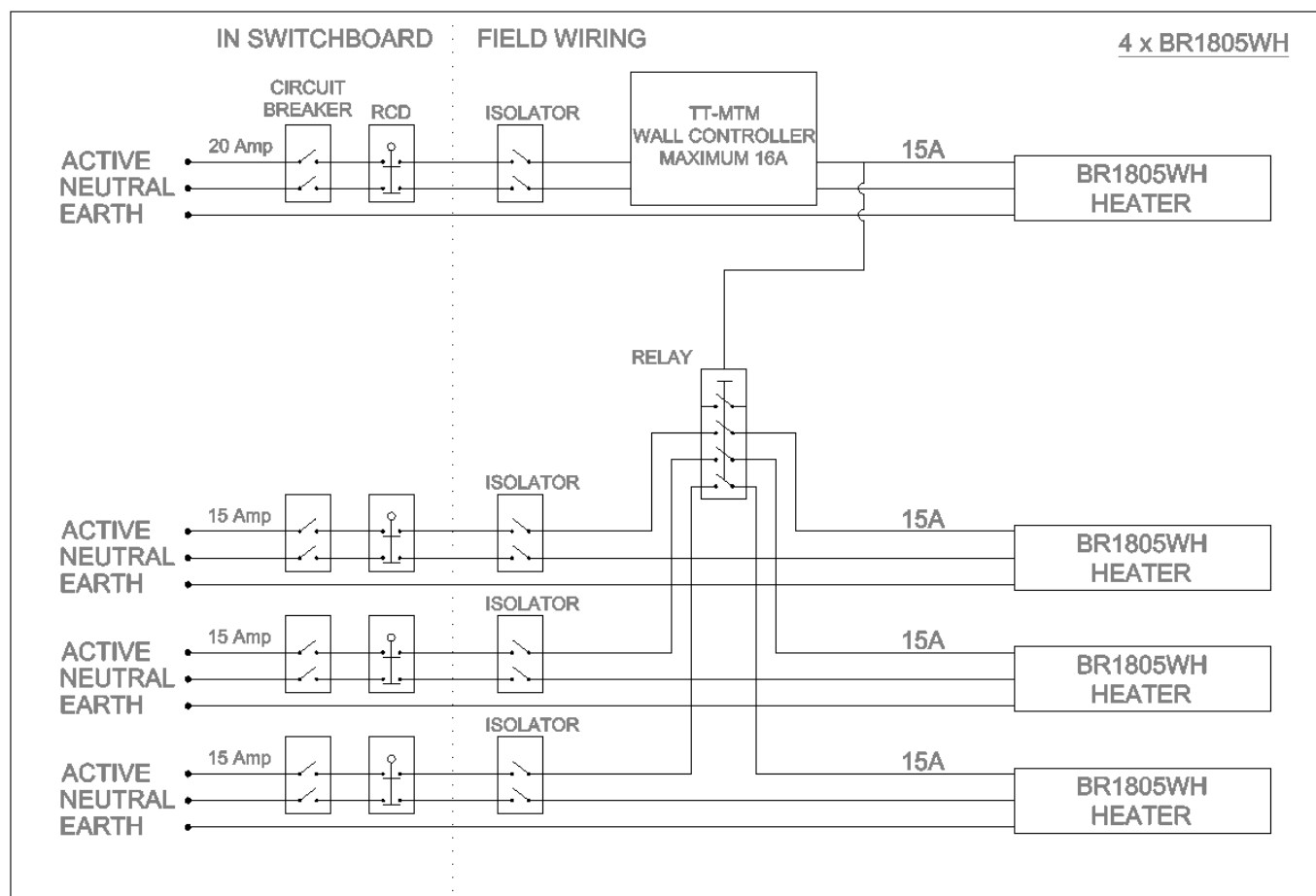
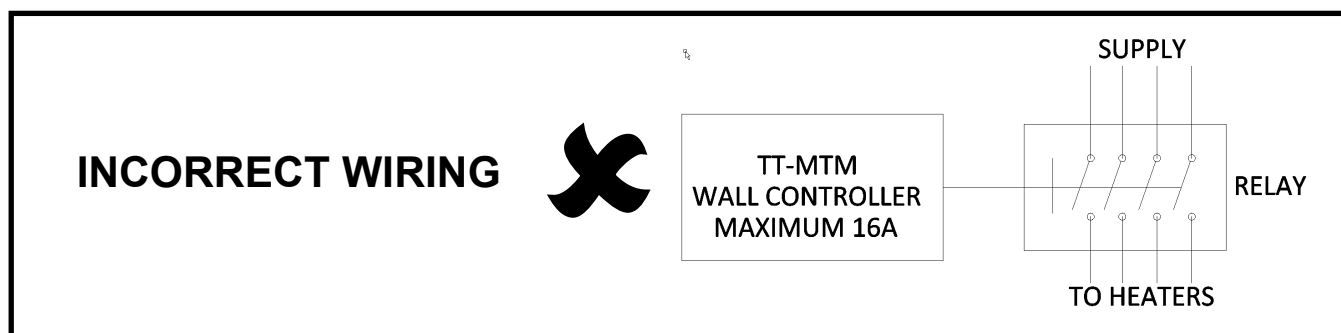
Heater wiring schematic diagram with relays

When more heating units need to be connected from the same controller a relay will be required. It is recommended that you talk to your electrician for more detail.

Below is an example circuit indicating two potential installation configurations. Always check with your electrician and ensure all wiring is in accordance with local regulations.

Note to electrician: The controller modulates the heat output using a “timed on / timed off” function. The controller does not modulate the voltage output. A relay is therefore suitable for this application.

CAUTION: A MINIMUM 250W LOAD MUST BE PLACED ACROSS THE CONTROLLER
Failure to provide this minimum load will potentially damage both the relay/contactors AND the controller.



Warranty Terms & Conditions

The below Warranty Terms and Conditions apply for **New Zealand and Australia only**. For international warranty please refer to international warranty terms and conditions.

Thermofilm warrants to the original owner that BLISS range electric heaters will be free from defects in materials and workmanship for a period of 24 months from the date of purchase for residential applications and 12 months for commercial applications in accordance with the following warranty terms and conditions.

Provision of this warranty is subject to:

- The BLISS products must be installed in accordance with the Installation Instructions and relevant electrical standards and codes.
- The BLISS products must be maintained and cleaned according to instructions detailed in the Installation Manual.
- There is no warranty expressed or implied with regard to capacity requirements. The selection of the unit or units depends entirely upon the system design and capacities as determined by the purchaser.
- The customer has not repaired, opened or altered the product in any unauthorised manner.
- This warranty excludes damage to the product or components arising from circumstances outside the control of Thermofilm, including, but not limited to, where the product is not used for intended purpose; where the product has been rectified in any way; incorrect installation; incorrect power supply; damaged caused during delivery; misapplication, misuse, abuse, vandalism, lack of maintenance or accident.
- Thermofilm's obligations under this warranty are limited to repair or replacement at Thermofilm's factory of any components of the product which Thermofilm identifies to its satisfaction to be defective.
- Transportation charges involved in return of the product to the Thermofilm factory (or any other location authorised in writing by Thermofilm) is the sole responsibility of the customer.
- All products are inspected and tested before despatch and are at the risk of the purchaser after the shipment from the Thermofilm factory, if not delivered by Thermofilm to destination.
- No products or components will be supplied in advance of an examination of the faulty product or components by Thermofilm or an authorized representative of Thermofilm.
- Thermofilm does not participate in any site related costs or labour expenses incidental to replacement of parts, repairing, removing, installing, servicing, transportation or handling of parts to complete products, and assumes no liability on parts repaired or replaced without written authorisation. Thermofilm shall not be liable for any default or delay in performance of its warranty obligations caused by any circumstances beyond its control, including, but not limited to, judicial or government restrictions, strikes, fires, floods, abnormal weather conditions, delayed supply of components.

Should products be determined as damaged on arrival, immediately notify the transport company of the condition and have them noted on the freight documents. If damage is discovered after unpacking, demand immediate inspection by the transportation company and insist that a record of the damage is made on the freight documentation.

The customer warrants using the product in accordance with:

- Any instructions provided to it by Thermofilm from time to time.
- All government and local regulations, including but not limited to all relevant electrical, environmental laws and regulations governing the installation, storage, use, handling and maintenance of the goods.
- All necessary and appropriate precautions and safety measures relating to the installation, storage, use, handling and maintenance of goods.

Our goods come with guarantees that cannot be excluded under the 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.

All warranty requests for repairs or replacements must be accompanied by a complete "Warranty Claim Form" available from Thermofilm, together with proof of purchase (and where possible, photos of the installation) and the heater returned to the place of purchase.

In the event of a warranty claim, the goods need to be returned to the distributor/retailer for repair/replacement. Contact

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