INSTRUCTIONS FOR:-
INDUSTRIAL SPACE HEATER
OUH3-40

Thank you for purchasing a BN Thermic product. Manufactured to a high standard, this product will, if used according to these instructions and properly maintained, give you years of trouble-free performance.

To make sure that you have selected the correct heater for your application, please read Section 13 on the back page before installation.

REGISTER: PLEASE REGISTER THIS PRODUCT ONLINE TO ACTIVATE YOUR GUARANTEE AT www.bnthermic.co.uk

IMPORTANT: PLEASE READ THESE INSTRUCTIONS, NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

1. SAFETY INSTRUCTIONS

1.1 ELECTRICAL SAFETY

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. If in any doubt consult a qualified electrician.

You must also read and understand the following instructions concerning electrical safety.

- The Health & Safety at Work Act 1974 makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. If in any doubt about electrical safety, contact a qualified electrician.
- Installation should in accordance with current IEE electrical regulations.
- Ensure that the insulation of all the cables on the appliance are undamaged and safe, before connecting it to the power supply.
- Ensure that the cables are always protected against short circuit and overload.
- Regularly inspect the power supply cables and plugs etc. for wear or damage and check all connections to ensure that none are loose. This is especially important on the internal mains connecting terminal block as any vibration may loosen the terminal screws.
- Important: Ensure that the voltage marked on the appliance matches the power supply to be used and that a correctly rated fuse is fitted.
- DO NOT use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician.
- A suitable local isolating switch must be provided in the electrical supply circuit as close as possible to the heater with at least 3mm clearance on each pole. This must only be used to turn off the heater in an emergency or once the heater has fully cooled down.
- This heater is IP20 rated and is suitable for indoor use only.
- The controls and heaters may be fed from a different source, and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.
- If there are 2 or more heaters being used as a Master / Slave system there may be 400v ac present in the control boxes due to supplies being taken from different phases.
- If you connect the heaters together in a Master / Slave configuration you can only use one RCD (Residual Circuit Device) for all heaters and individual MCB's for each heater.
- Do not attach this heater to an extension cord it must be hard wired in position.

1.2 GENERAL SAFETY INSTRUCTIONS

- ✓ Remove all packaging and store it away from children, check the package and heater for visible damage or tampering.
- ✓ Familiarise yourself with the applications and limitations of the heater.
- ✓ Ensure the heater is in good order and condition both physically and electrically before use. If in any doubt, do not use the unit and contact your supplier.
- ✓ Only use recommended attachments and parts. To use unauthorised parts may be dangerous and will invalidate your warranty.
- ✓ Keep tools and other items away from the heater when it is in use.
- ✓ Keep children and unauthorised persons away from the heater, as it gets **hot.**
- ✓ Disconnect from mains and allow to cool before attempting any cleaning or maintenance.
- X **DO NOT** use in areas where hazardous gases or dusts may be present.
- X **DO NOT** locate the heater directly below the power outlet.
- X **DO NOT** disassemble the heater for any reason. This heater must be checked by qualified personnel only.
- X **DO NOT** use this heater to perform a task for which it has not been designed.
- ❑ **WARNING!** Ensure you observe the safety distances and mounting heights and there is no possibility of inflammable materials coming into contact.



2. INTRODUCTION & SPECIFICATION

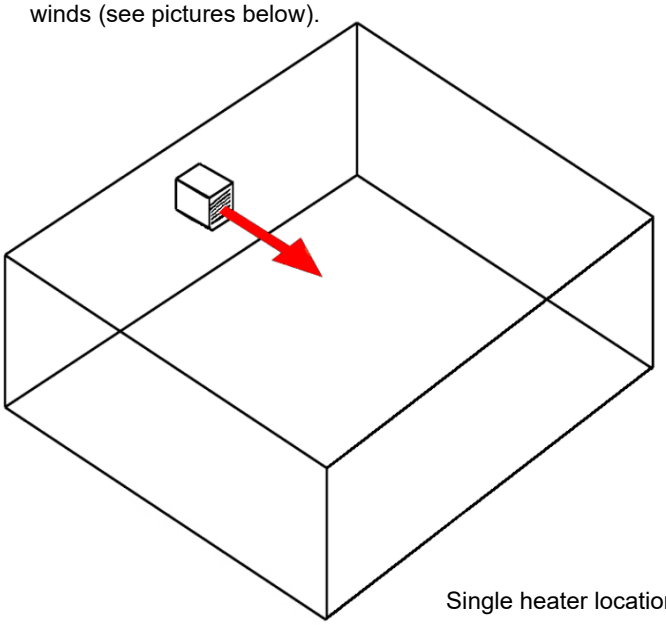
This heater produces a totally dry heat, no condensation, no gas, no fumes. It incorporates a prewarm up that on cold days heats the elements before the fan turns on. It reaches maximum heat output within a few minutes of being turned on. It is quick and easy to install reducing installation costs. Air temperature can be controlled by the heater's built-in thermostat or alternatively by a variety of remote-mounted thermostats and other control devices. Where required, a group of heaters can be interconnected and controlled from a single remote-mounted thermostat. This allows a very easy and cheap way of controlling heating in large or small areas.

Model	Power	Input Supply	Three Phase wiring Amps / per Phase	Dimensions W x D x H (mm)	Weight	Recommended Minimum Mounting Height	Safety Distance from Heater
OUH3-40	40kW	400v 3Ph+N	58A / Phase	642 x 764 x 582	56kg	3m	2.0m

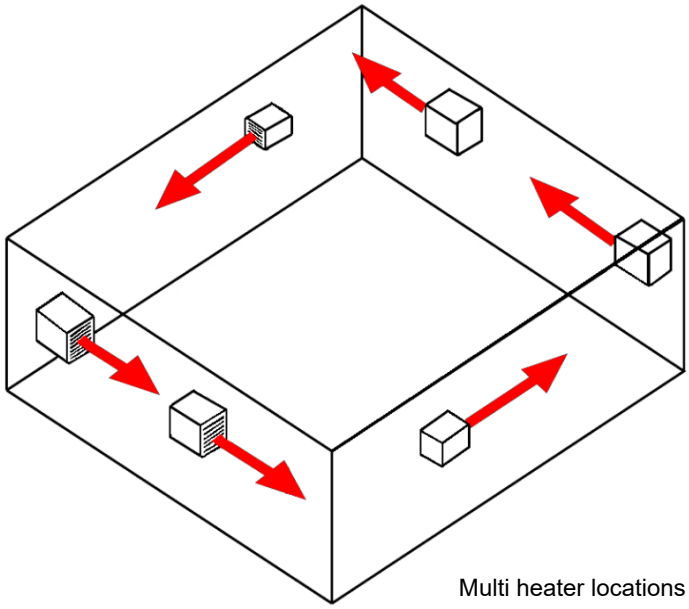
3. MOUNTING INSTALLATION

The heater is supplied with the following:- 2 x U Brackets and 6 x M5 Screws and flat washers plus 4 x Right angled brackets and 4 x M8 Bolts, star washers, and nuts.

LOCATION - For best results, do not mount higher than 3m. If you need to exceed this height increase the mounting angle so the heater is facing downwards. Direct air flow away from occupants, posts, and columns, including equipment. Ideally allow the warm air to travel parallel to the outside walls, along the most exposed part of the building, which is normally subjected to the prevailing winds (see pictures below).

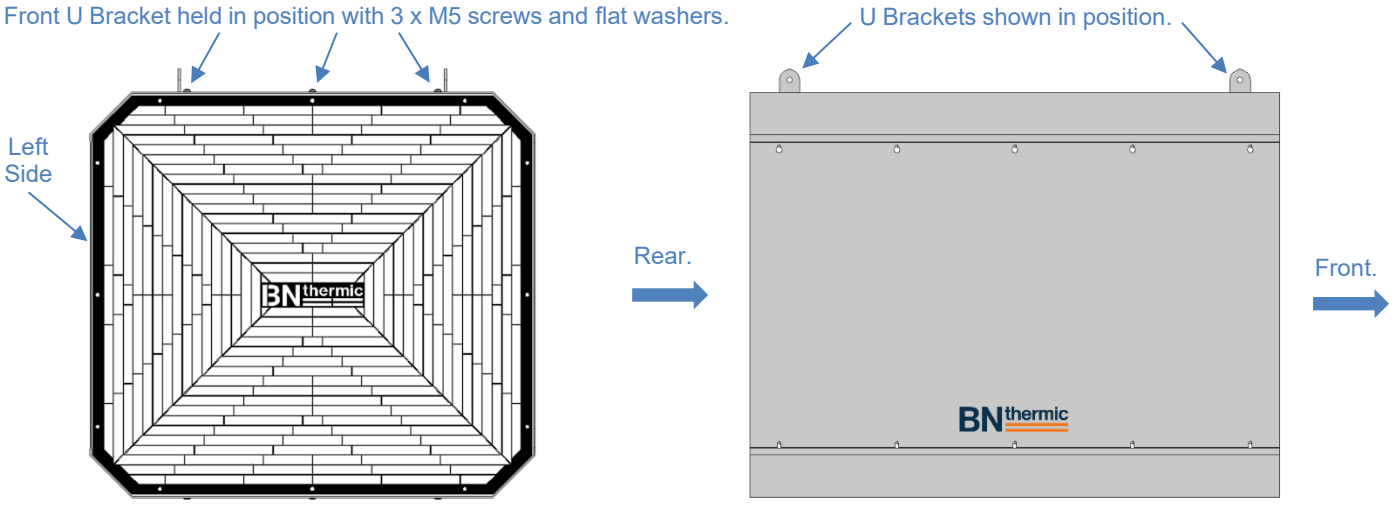


Single heater location

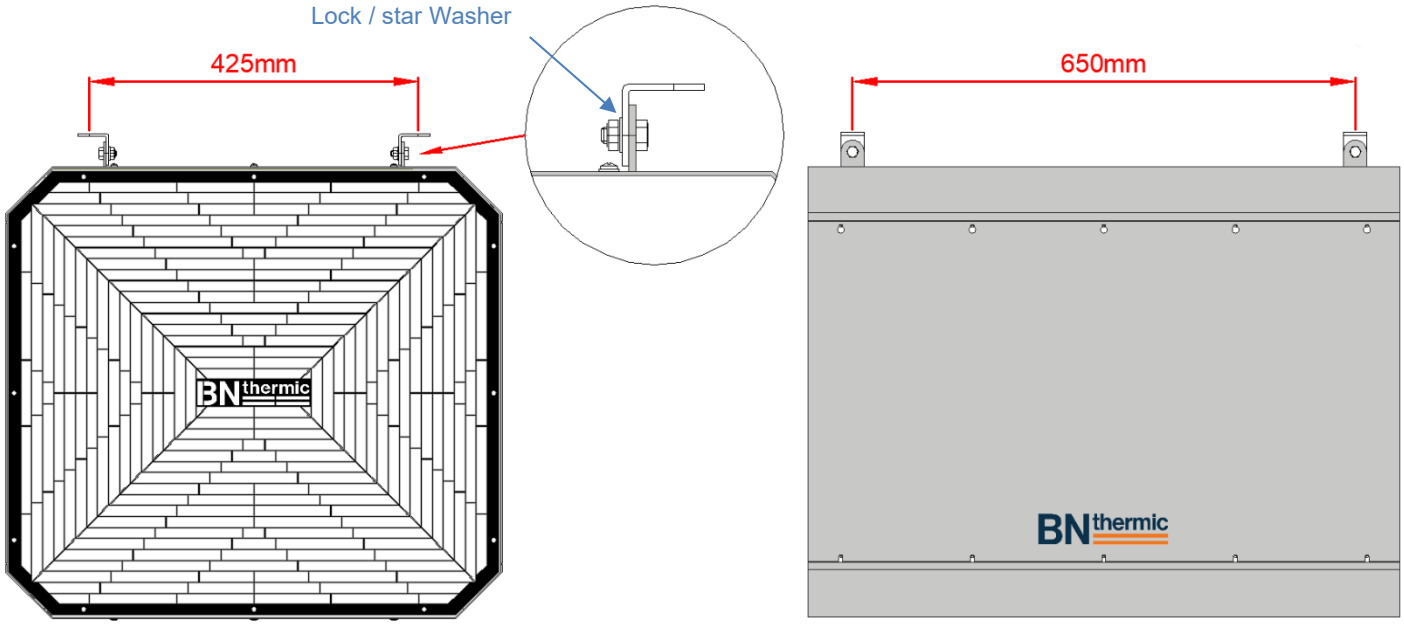


Multi heater locations

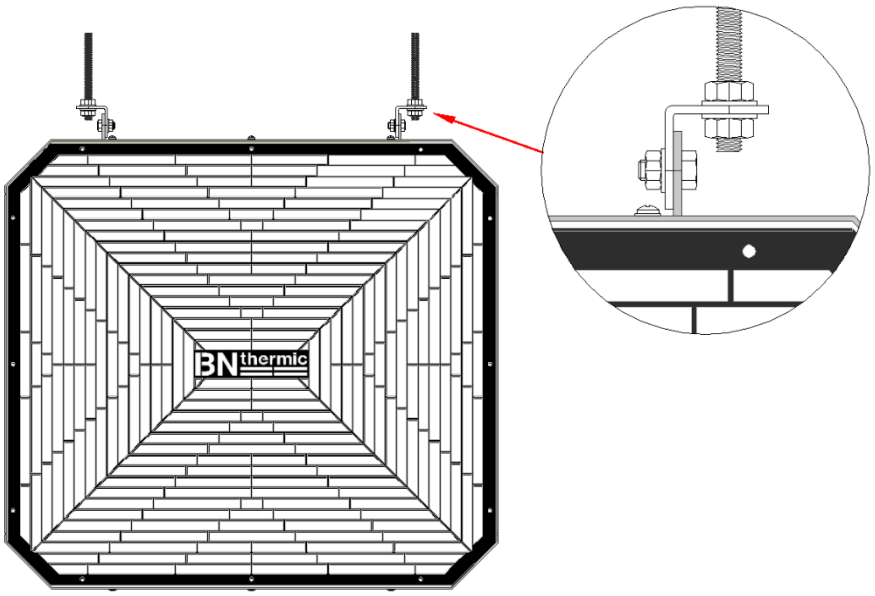
2 x U BRACKETS- The U Brackets are fitted from the inside of the heater. Remove the left side cover (opposite to electrical cover) and fit the front U Bracket from inside the heater. Secure this in place using 3 x M5 screws and washers. Now fit the rear U Bracket at the far end near the fan guard. Slide the bracket between the fan guard and the top of the heater and when near the 2 slots twist the bracket 90 Degrees so it fits through the slots, now secure with 3 x M5 screws and washers. Refit the side cover.

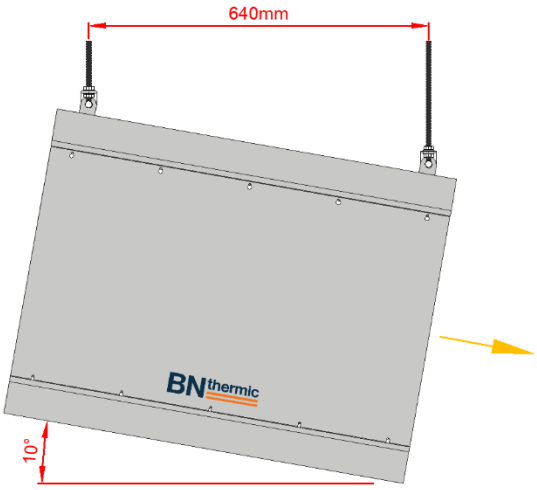


4 x Right Angled Brackets – Fit these as per drawing below ensuring that you use the lock washer as shown on each bracket.



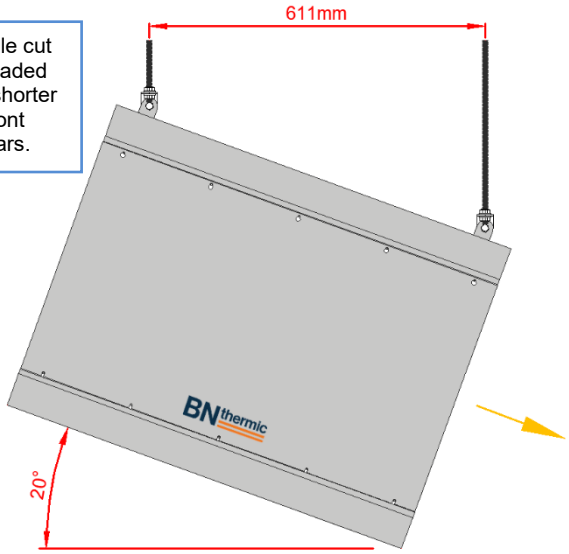
Hanging on 10mm Threaded Rod – The heater is designed to hang from 4 lengths of 10mm threaded rod (not supplied). The threaded rod should be fitted through each bracket as shown in drawing directly below. Please make sure the other end of the threaded rods can support the total weight of the heater including electrical cables. The Heater can be mounted at an angle by following the drawings below. We don't recommend mounting the heater at an angle greater than 30° from horizontal.



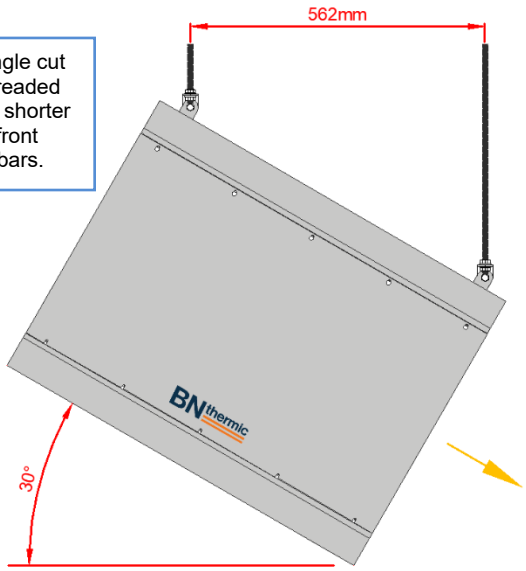


For a 10° angle cut the back threaded bars 112mm shorter than the front threaded bars.

For a 20° angle cut the back threaded bars 222mm shorter than the front threaded bars.



For a 30° angle cut the back threaded bars 325mm shorter than the front threaded bars.



IMPORTANT:- Please ensure that the Hanging Brackets are mounted / fitted as per picture to the right before preceding with the electrical connections below.



Top View of Heater

4. ELECTRICAL CONNECTIONS

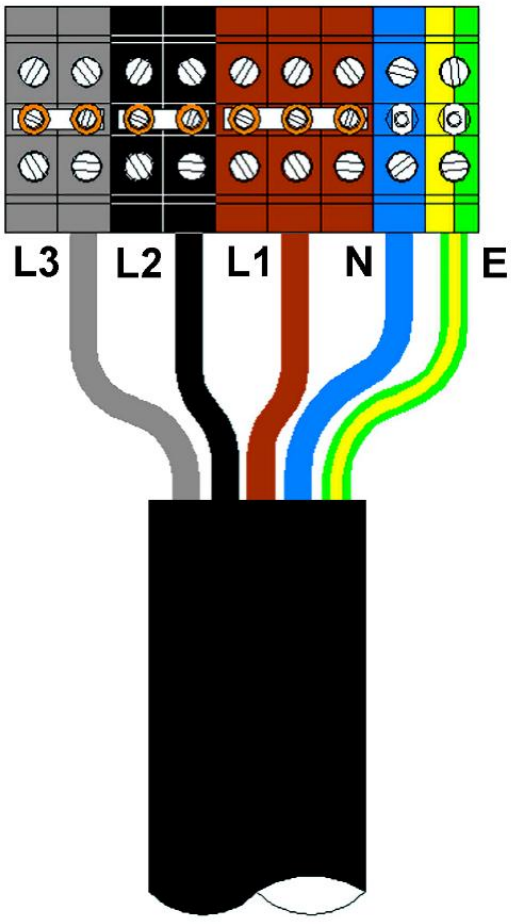
The Heater can only be wired 400V 3 phase, Neutral and Earth.

All Heaters MUST BE EARTHED.

Due to the heater having "Fan Over Run" circuitry the heater must not be turned ON and OFF using the mains supply isolator. The mains supply isolator should only be used in an emergency or if you need to turn off the heater (once cooled down) for long periods. The heater should be turned off using the thermostat on the back or any approved control device. See Section 8 for further information on the fan over run.

There are 3 x 20mm, 1 x 25mm and 1 x 32mm knockouts on the back of the heater and an additional 3 x 20mm, 1 x 25mm and 1 x 32mm knockouts on the top of the heater. Terminal block fits up to 16mm² Cable.

Please make sure you have read the Safety instructions and that you are a suitably qualified electrician before continuing.
Please Note:- Specified cable sizes are for typical installations, correction factors may need to be used when determining actual cable sizes.
Do NOT use power tools to undo or do up terminal screws.



PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE.

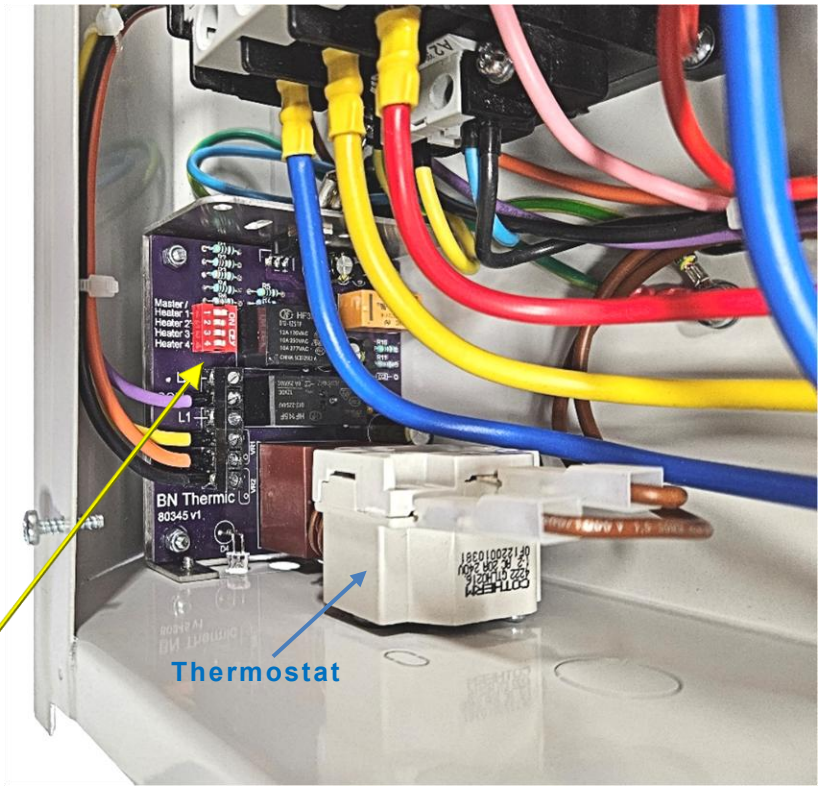
Cable Size

Use minimum 10mm² 5 Core Mains Cable (see note above).

Connect Brown / Phase 1 Wire – Terminal L1 of Heater
Connect Black / Phase 2 Wire – Terminal L2 of Heater
Connect Grey / Phase 3 Wire – Terminal L3 of Heater
Connect Blue / Neutral Wire – Terminal N of Heater
Connect Green/ Yellow / Earth Wire – Terminal E or ⏚ of Heater

Pre-Heat Electronic Controller

The heater is fitted with an electronic pre-heat control circuit board. If the air temperature is cool, the controller will pre-warm three of the electric elements and not blowing cold air as soon as the heater is turned on. It also ensures that the full load of the heater is not turned on at once.



How It works

The control board manages the turning on sequence and thus avoiding a sudden inrush of power as the heater starts.

A maximum of 20kW spread across 3 phases is turned on at any one time as per the following schedule.

Heater	Dip Switch setting	Time	KW turned On	Time	KW Turned on
1 or Master	Switch 1 ON only	1s	20kW (1/2 Heat)	31s	40kW (full Heat)
2	Switch 2 ON only	8s	20kW (1/2 Heat)	38s	40kW (full Heat)
3	Switch 3 ON only	16s	20kW (1/2 Heat)	46s	40kW (full Heat)
4	Switch 4 ON only	24s	20kW (1/2 Heat)	54s	40kW (full Heat)

If you only have one heater set DIP switch No1 to ON. The other DIP switches should be set to off.

If you have 2 heaters or more and they are being connected in a Master / Slave arrangement (see section 6) set the Master Heater to 1 on the dip switch and the slaves to 2, 3 and 4 on the dip switch. If you have more than 4 heaters set the 5th heater to 1 on the dip switch 6th heater to 2 and so on.

The Master heater is the heater that you connect any controls to.

Please ensure only one DIP switch is turned on per heater.

If you leave all the DIP switches OFF the heater will not start.

Please also inform the owner about this time delay as they may think there is a fault if all the heaters don't turn on instantly.

If you are not using any controls other than the heater's built-in thermostat AND are not using the heater in a Master/Slave configuration go to section 7 – LINK CONNECTIONS (page 11).

5. ADDING ADDITIONAL CONTROLS.

You may add the following controls to the OUH3 Space Heater all of these controls if connected as shown in the wiring diagrams are protected by the heaters internal 5A fuse.



OUH3-S
Heater Control Switch



OUH3-DT
Digital Thermostat + Fan Only Switch



OUH3-WiFi
WiFi Thermostat + Fan Only Switch



PROTIM-7
7 Day Time Switch



PROSTAT4
2 Set Point Thermostat



RST-RS / FST-RS
Tamper Resistant thermostats



PROSTAT2
Battery Digital Thermostat



RST3-IN
Thermostat



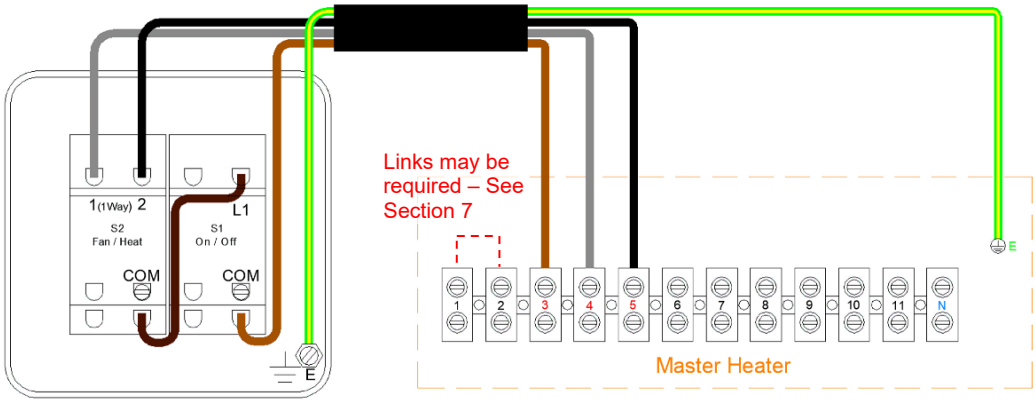
CXS
Remote Sensor

- **OUH3-S** Heater control switch – Remote way of turning the heater ON/OFF or selecting Fan Only in the summer. We recommend this as a minimum control for your heater. This can either be wall mounted or fixed to the back of the heater using knockout and screw holes provided.
- **OUH3-DT** Digital Thermostat - A 7 Day, 6/1 Day or 5/2 Day programmable thermostat which offers four time and temperature changes each day. There is also a switch for selecting Fan Only / Off / Heat (if thermostat allows). You may also install a remote sensor if you wish to install the thermostat in a different location or area to the heaters. All settings are stored in the controller with battery back-up.
- **OUH3-WiFi** Wi-Fi version of the OUH3-DT thermostat which can be controlled on a mobile phone. There is also a switch for selecting Fan Only / Off / Heat (if thermostat allows). You can also use a remote sensor if you wish to allow the thermostat to be installed in a different location to the heaters. All settings are stored in the controller with battery back-up.
- **PROTIM-7** 7 Day programmable timer. This timer will only allow the heating to operate during the "ON" time settings. During "OFF" period there is a "Boost" button that with one press allows heating to operate for 1 hour or with 2 presses 2 hours before turning off. The boost can be cancelled by pressing the "Boost" button a third time.
- **PROSTAT4** The PROSTAT4 thermostat is a highly accurate electronic temperature controller suitable for heavy duty use in public areas. There are two temperature settings switchable through a push button and integral countdown timer. Optional remote sensors are available if temperature co 4 l is required away from the controller.
- **RST-RS** Rough service, tamper resistant thermostat – Can be used on its own as a room thermostat or in conjunction with the OUH3-S Heater control switch.
- **FST-RS** Rough Service, tamper resistant **f**rost thermostat –This thermostat overrides all other controls including the OUH3-S, OUH3-DT or OUH3-Wi=IFI when they are set to OFF. This is used to protect the heated area against low temperatures that may cause damage or freezing of water etc. The thermostat MUST be mounted out of direct air flow of the heater.
- **PROSTAT2** Battery Operated Digital Thermostat is a 7 Day or 5/2 Day programmable room thermostat which offers six time and temperature changes each day. All settings are stored in the controller.
- **RST3-IN** thermostat – Can be used on its own as a room thermostat or in conjunction with the OUH3-S Heater control switch.
- **CXS** Remote Temperature Sensor – Used with OUH3-DT and OUH3-WiFi to read temperature in a different area to the controller.

If you connect heaters in a Master / Slave configuration (See Section 6) controls are only added to the master heater and all the slave heater(s) will follow the master.

5.1 CONECTING A OUH3-S HEATER CONTROL SWITCH

This can either be mounted on a wall or on the back of the heater next to the thermostat. If mounting on the heater, remove the knockout in the heater and electrical box of the OUH3-S and screw onto the heater using 2 x M4 screws and nuts (not supplied).



OUH3-S Control Switch



OUH3-S Mounted on the back of the heater

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.

Use 0.75mm² 4 core cable

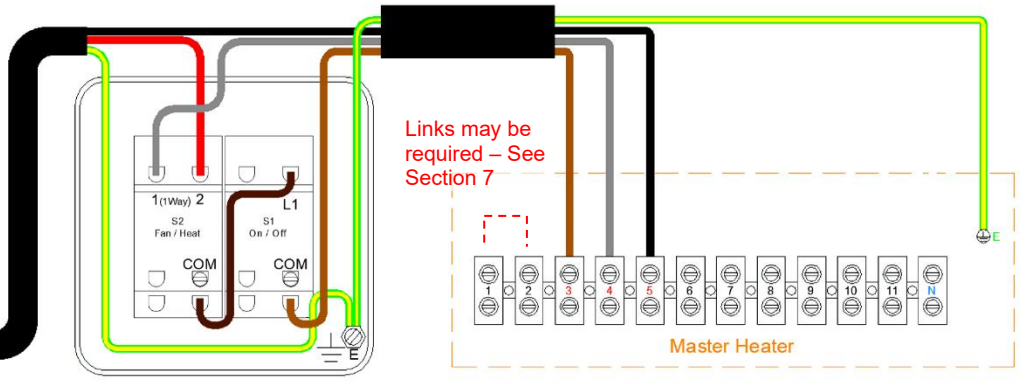
Connections – (Colours for reference only)
Connect Brown Live wire – Terminal 3 of Heater and Terminal L on Control Switch (230V Live connection).
Connect Grey Live wire – Terminal 4 of Heater and Terminal 1 on Control Switch.
Connect Black wire – Terminal 5 of Heater and Terminal 2 on Control Switch.
Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E (Earth connection) on Control Switch.

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

5.2 CONECTING A RST-RS or RST3-IN THERMOSTAT & OUH3-S CONTROL SWITCH



RST-RS Thermostat



OUH3-S Control Switch

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.

HEATER to CONTROL SWITCH

Use 0.75mm² 3 or 4 core cable

Connections – (Colours for reference only)
Connect Brown Live wire – Terminal 3 of Heater and Terminal L on Control Switch (230V Live connection).
Connect Grey Live wire – Terminal 4 of Heater and Terminal 1 on Control Switch.
Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E (Earth connection) on Control Switch.

HEATER to THERMOSTAT

Use 0.75mm² single core wire OR add it to multi core cables

Connect Black wire – Terminal 5 of Heater and Terminal **L**out on RST-RS Thermostat or Terminal 3 on RST3-IN Thermostat. Please note; Black wire can be joined in the control switch using a suitable terminal block to allow easy install of controls. Black wire carries 230v.when thermostat is on.

CONTROL SWITCH to THERMOSTAT

Use 0.75mm² 2 or 3 core cable

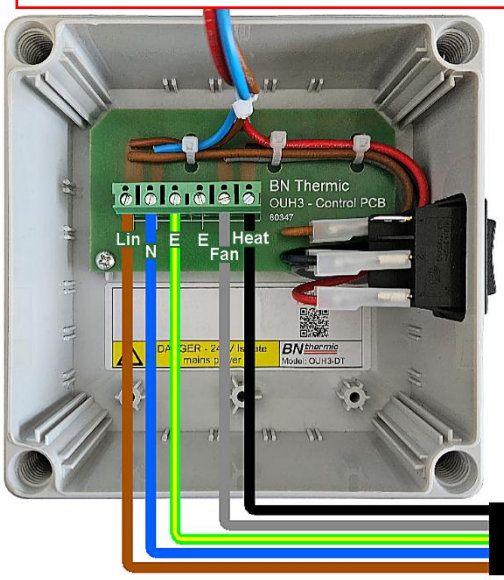
Connections – (Colours for reference only)
Connect Red wire – Terminal 2 of Control Switch and Terminal **L**in on RST-RS Thermostat or Terminal 1 on RST3-IN Thermostat.
Connect Green / Yellow wire – Terminal E or ⏚ of Control Switch and Terminal E (Earth connection) on Thermostat.

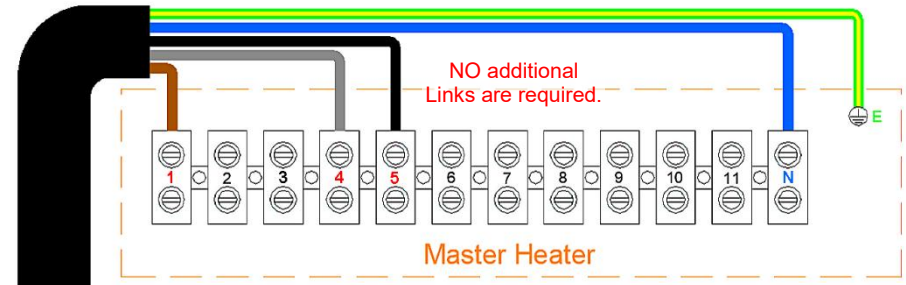
PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

PLEASE NOTE:-Turn up fully the internal thermostat on the back of the heater so it does not override this thermostat.

5.3 CONECTING A OUH3-DT OR A OUH3-WiFi THERMOSTAT + FAN ONLY OPTION

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.





Use 0.75mm² 5 core cable

Connections – (Colours for reference only)

Connect Brown Live wire – Terminal 1 of Heater and Terminal "Lin" on Control Switch.

Connect Grey Live wire – Terminal 4 of Heater and Terminal "Fan" on Control Switch.

Connect Black wire – Terminal 5 of Heater and Terminal "Heat" on Control Switch.

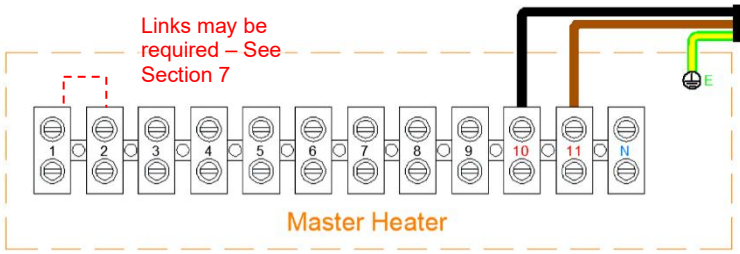
Connect Blue wire – Terminal N of Heater and Terminal N on Control Switch.

Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E on Control Switch

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

5.4 CONECTING A FST-RS FROST PROTECTION THERMOSTAT

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.





FST-RS Frost Protection Thermostat

Use 1.0mm² 3 core cable

Connections – (Colours for reference only)

Connect Black wire – Terminal 10 of Heater and **L**out on Frost Thermostat.

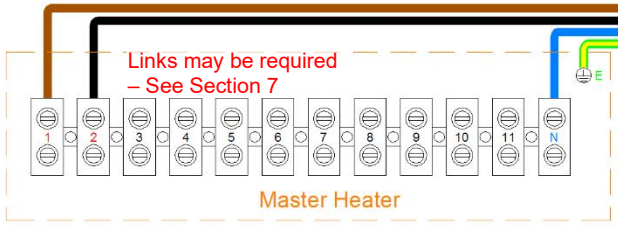
Connect Brown Live wire – Terminal 11 of Heater and **L**in on Frost Thermostat (230V Live connection).

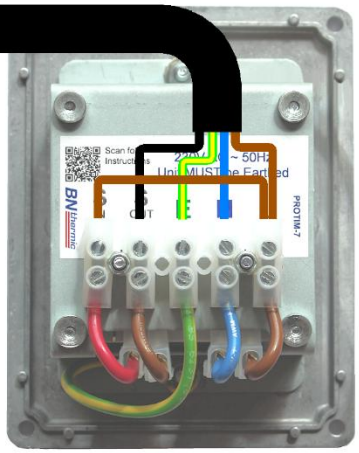
Connect Green / Yellow wire – Terminal E or ⏚ of the Heater

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE.

5.5 CONECTING A PROTIM-7 7 DAY PROGRAMABLE TIMER

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.







Use 0.75mm² 4 core cable

Connections – (Colours for reference only)

Connect Brown Live wire – Terminal 1 of Heater and Terminal L on Programmable Timer (230V Live connection).

Add a Link cable (1mm²) between Timer L connection and Timer **S**in connection.

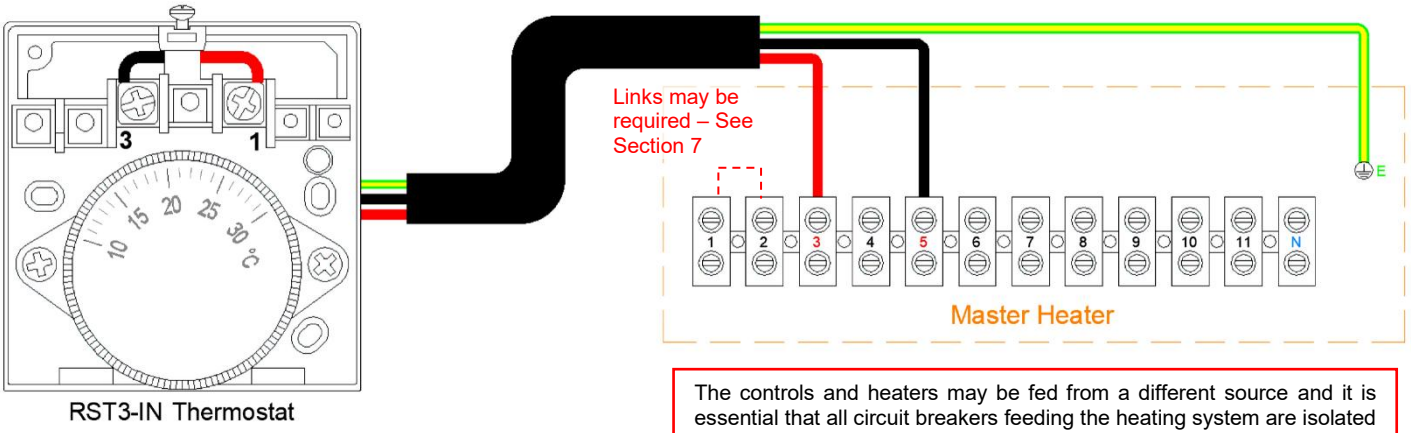
Connect Black wire – Terminal 2 of Heater and Terminal **S**out on Programmable Timer.

Connect Blue Neutral wire – Terminal N of Heater and Terminal N on Programmable Timer (230V Neutral connection).

Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E (Earth connection) on Programmable Timer.

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

5.6 CONECTING A RST3-IN or RST-RS THERMOSTAT



RST3-IN Thermostat

The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.

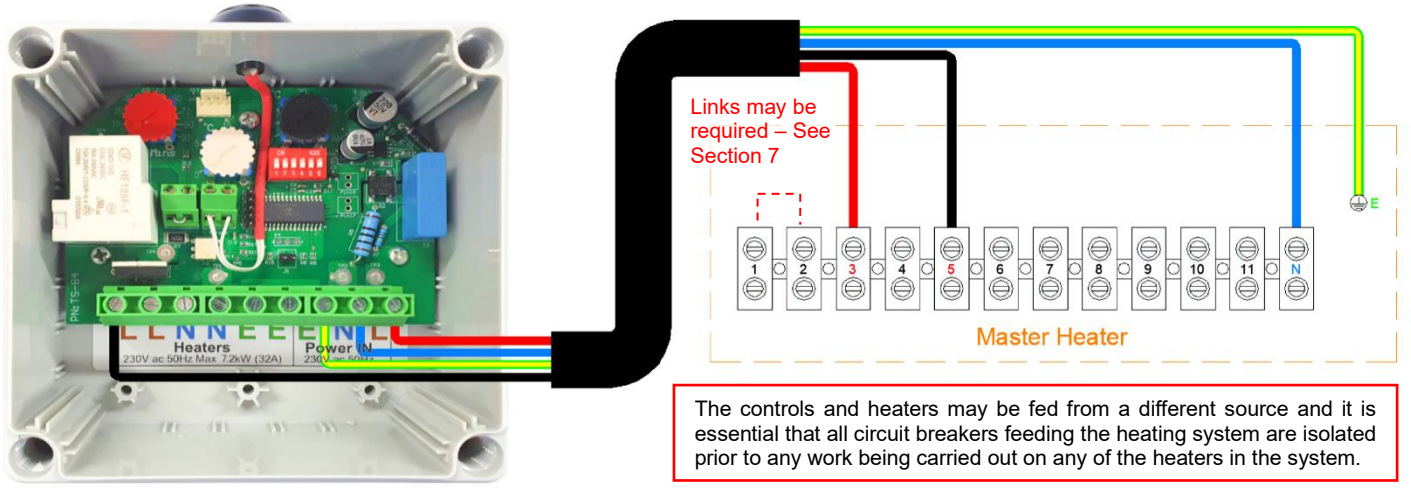
Use 1.0mm² 3 core cable

Connections – (Colours for reference only)
Connect Red wire – Terminal 3 of Heater and Terminal 1 on an RST3-IN Thermostat or Terminal **L**in on an RST-RS Thermostat.
Connect Black wire – Terminal 5 of Heater and Terminal 3 on an RST3-IN Thermostat or Terminal **L**out on an RST-RS Thermostat.
Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E (Earth connection) on either Thermostat.

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

PLEASE NOTE:-Turn up fully the internal thermostat on the back of the heater so it does not override this thermostat

5.7 CONECTING A PROSTAT4 THERMOSTAT



The controls and heaters may be fed from a different source and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.

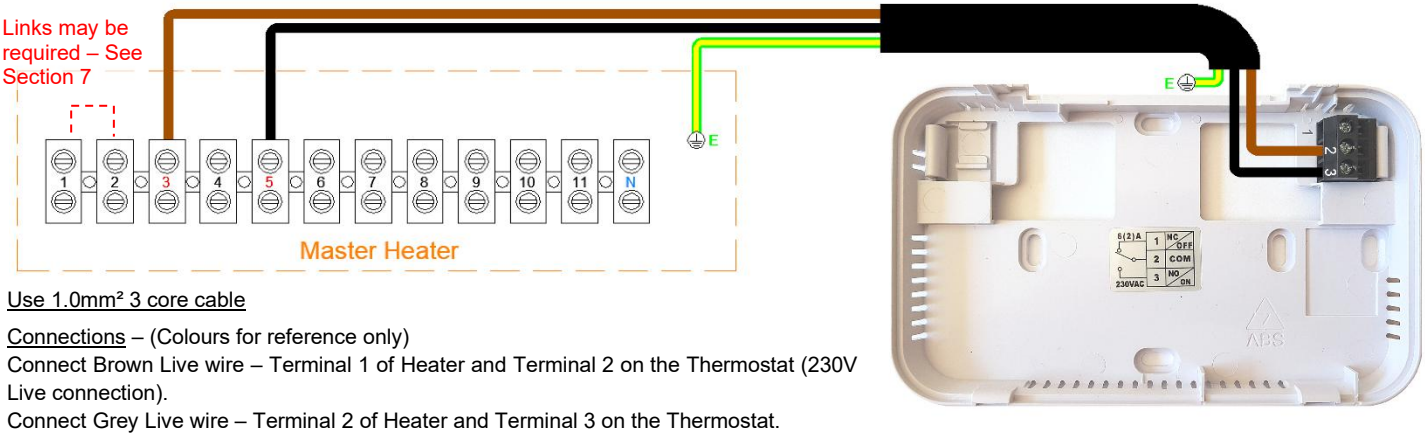
Use 0,75mm² 4 core cable

Connections – (Colours for reference only)
Connect Red wire – Terminal 3 of Heater and Power IN - Live Terminal (L) on Thermostat.
Connect Black wire – Terminal 5 of Heater and Heaters Live Terminal (L) on Thermostat. Black wire carries 230v when thermostat is on.
Connect Blue Neutral wire – Terminal N of Heater and Power IN - Neutral Terminal (N) on Thermostat.
Connect Green / Yellow wire – Terminal E or ⏚ of Heater and Terminal E (Earth connection) on Thermostat.

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

PLEASE NOTE:-Turn up fully the internal thermostat on the back of the heater so it does not override this thermostat

5.8 CONECTING A PROSTAT2 THERMOSTAT



Use 1.0mm² 3 core cable

Connections – (Colours for reference only)
Connect Brown Live wire – Terminal 1 of Heater and Terminal 2 on the Thermostat (230V Live connection).
Connect Grey Live wire – Terminal 2 of Heater and Terminal 3 on the Thermostat.

PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

PLEASE NOTE:-Turn up fully the internal thermostat on the back of the heater so it does not override this thermostat.

6. CONECTING HEATERS IN A MASTER SLAVE ARANGEMENT

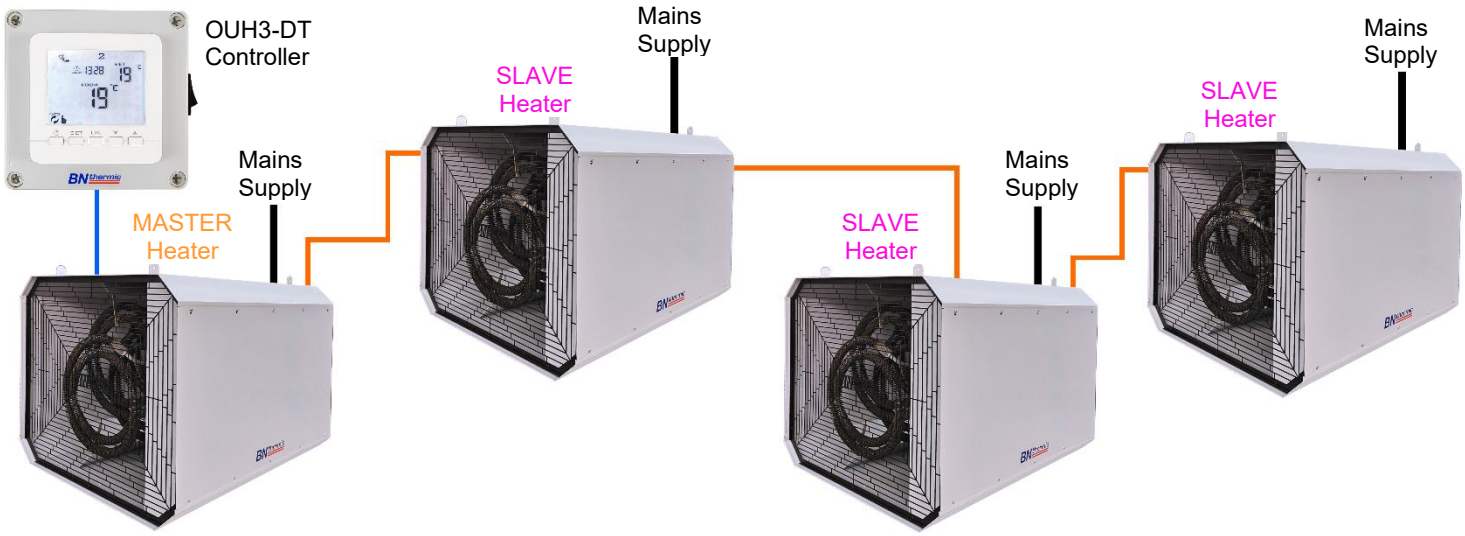
IF USING THE HEATERS IN A MASTER / SLAVE ARANGEMENT PLEASE READ THE FOLLOWING IMPORTANT NOTES BEFORE STARTING THE INSTALATION.

All OUH3 heaters may be connected in a Master / Slave arrangement.
The OUH3 heaters do not need to be the same Wattage or size.
Some OUH3 can be connected using 400v 3 phase supply and some Single phase and still linked as Master / Slaves.
If Using RCD (Residual Circuit Device) all Heaters connected in a Master / Slave arrangement MUST be supplied from the same RCD and not multiple RCD's. Then use a MCB for each heater.
The controls are always added to the master heater and NEVER to any of the slave heaters. You may designate any OUH3 heater to be the master as long as you adhere to the following.

1) Controls are only added to the master unit.
2) Controls if connected as shown in the wiring diagrams on pages 7 – 9 are protected by the master heaters internal 5A fuse.
3) Link connections / cables (see section 7), if required are only added to the master unit.
4) You are fully aware that if a slave unit is present in the system 400v ac may be present in the terminal blocks even if all heaters are run on single phase. This is because the supply to each heater may be taken from a different phase.
5) A maximum of 1 master and 15 slaves are used in each configuration.
6) If using OUH3-40 heaters remember to set the control circuit board DIP switch correctly depending on order of heaters.
7) Older OUH2 model heaters can still be connected to these new OUH3 models.

Typical set up

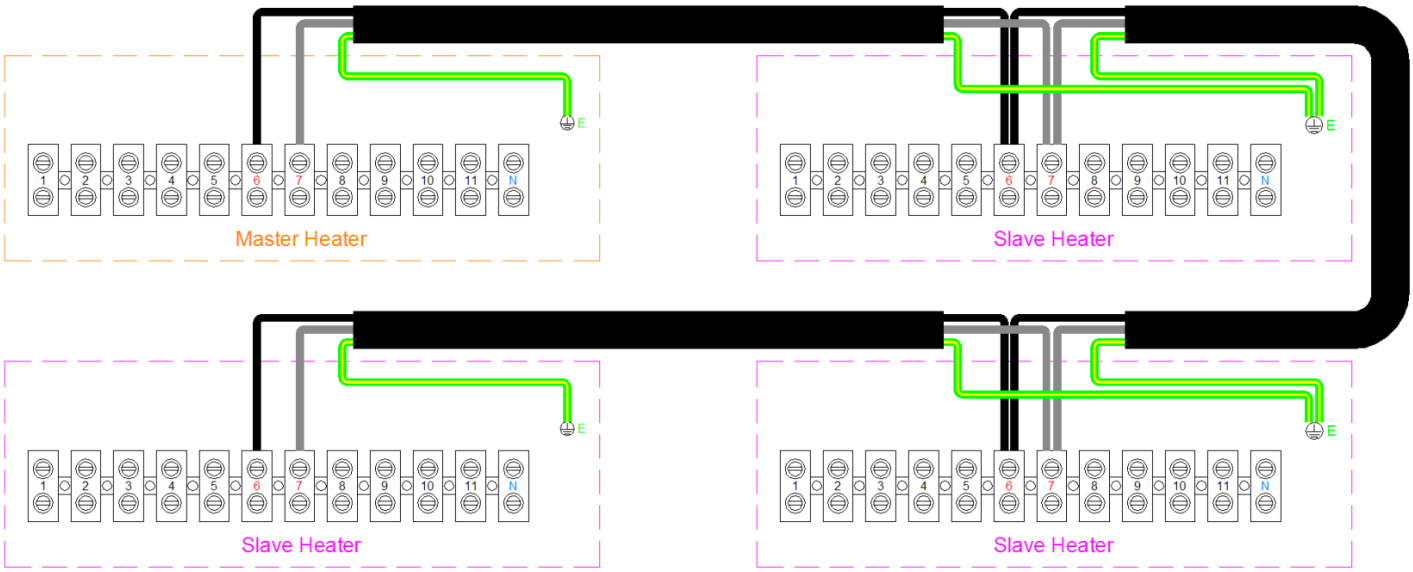
There are various options for connecting controls, master and slave units together. Below is one example.



Connect the mains wire to each heater as per section 4.
Decide which heater is going to be the master heater (set DIP switch 1 to ON) and connect the controls to it as per section 5.
Wire the master to the first slave (set DIP switch 2 to ON) as per drawing below and instructions on next page.
Wire first slave to second slave (set DIP switch 3 to ON) as per drawing below and instructions on next page.

The controls and heaters may be fed from a different source, and it is essential that all circuit breakers feeding the heating system are isolated prior to any work being carried out on any of the heaters in the system.

Linking Heater in a Master / Slave Configuration



Do NOT use power tools to undo or do up the terminal screws.

Linking Master Heater to First Slave Heater - Use 1.0mm² 3 core cable
Connections – (Colours for reference only)
Connect Black wire – Terminal 6 of Master heater and Terminal 6 of first Slave heater.
Connect Grey wire – Terminal 7 of Master heater and Terminal 7 of first Slave heater.
Connect Green / Yellow wire – Terminal E or ⏚ of Master heater and Terminal E or ⏚ of first Slave heater.

Linking Further Slave Heaters - Use 1.0mm² 3 core cable
Daisy chain slave heaters as per drawing to the left (Maximum number of slave heaters is 15)

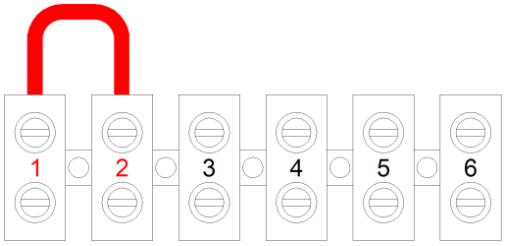
PLEASE CHECK ALL CONNECTIONS BEFORE TURNING ON AS INCORRECT WIRING IS NOT COVERED BY THE GUARANTEE

7. LINK CONNECTIONS

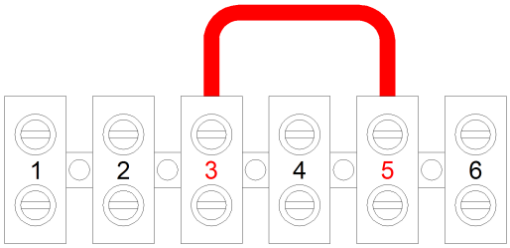
LINK CABLES ARE ONLY NEEDED IN SINGLE HEATERS USED ON THEIR OWN OR IN A MASTER HEATER AND DEPEND UPON WHICH CONTROLS YOU USE
NEVER ADD ANY LINKS TO SLAVE HEATERS- THIS COULD DAMAGE YOUR HEATERS AND IS NOT COVERED BY THE GUARANTEE

SINGLE HEATERS or MASTER HEATER LINKS

If you are NOT fitting a PROTIM-7 Timer or a PROSTAT2 Thermostat or OUH3-DT Digital Thermostat or OUH3-WiFi Thermostat to a single heater or the master heater in a Master / Slave set up LINK Terminals 1 & 2 (use 1.0mm² wire) as shown in drawing to the right.
DO NOT PUT THIS LINK CABLE IN ANY OF THE SLAVE HEATERS

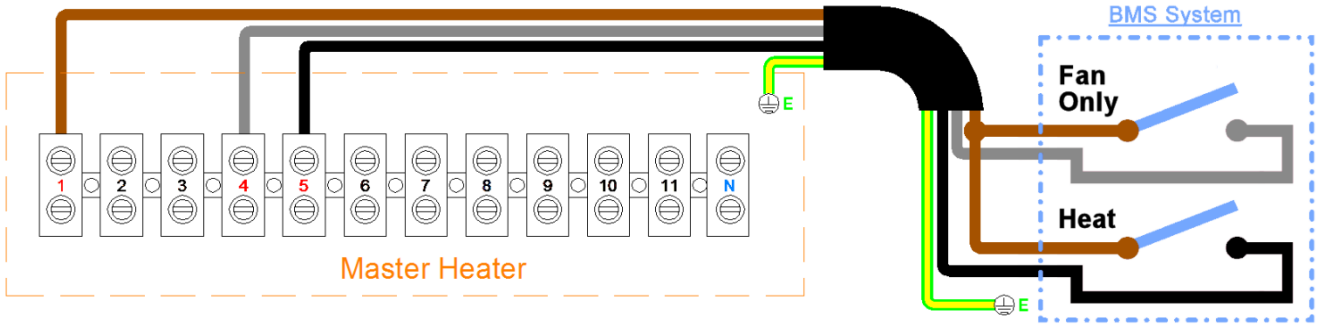


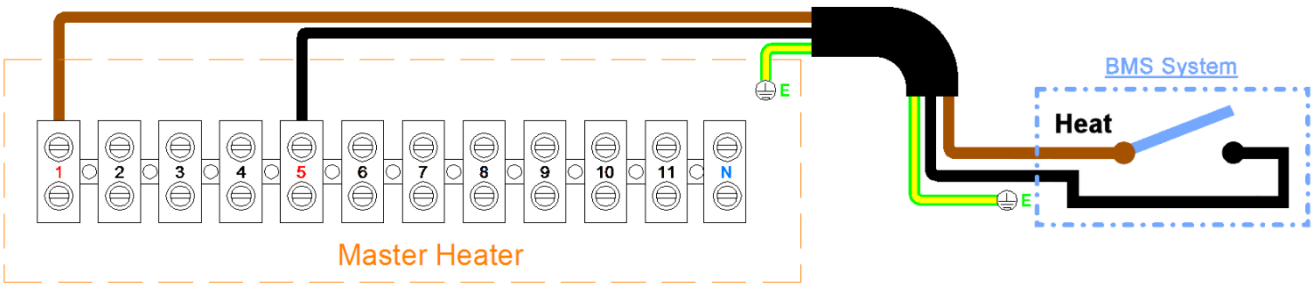
If you are NOT fitting an OUH3-S Heater Control Switch or OUH3-DT Digital Thermostat or OUH3-WiFi Thermostat or RST-RS or RST3-IN Thermostats or a PROSTAT4 Thermostat to a single heater or the master heater in a Master / Slave set up LINK Terminals 3 & 5 (use 1.0mm² wire) as shown in drawing to the right. DO NOT PUT THIS LINK CABLE IN ANY OF THE SLAVE HEATERS



8. BMS CONNECTION

You can connect the heaters to a building management system (BMS). If your BMS can switch 230V no other parts are required. If your BMS works on low voltage e.g 12v DC you will need to add a suitable relay into the system. There are two options for connecting into you BMS: Fan Only + Heat Only or Heat Only. Use the correct drawing below to connect the heaters. The Brown wire is the feed from the Master Heater. This is a 5A 230v live output. The return wires (Grey for Fan Only and Black for Heat) must also be capable of carrying 230v 5A. If the Heaters are connected in a Master / Slave set up just connect the BMS to the Master heater and all the slaves connected will follow. The thermostat on the back of each heater still works.





9. FAN OVER RUN

The heater incorporates a fan over run device that ensures that when the elements turn off, the temperature of the heater case and internal components does not increase significantly. This may either work by allowing the fan to continue running for a while when the elements turn off or by turning the fan back on if the temperature rises when the heater elements and fan turn off. This will normally only occur for a couple of minutes after the heating elements turn off. It is for the above reason that you must turn off the heater using a control device, BMS or the internal thermostat and NOT by isolating the mains power. Continuous turning ON and OFF of the heater using the mains supply isolator whilst it is running, can damage the heater and is not covered by the guarantee.

10. TROUBLE SHOOTING AND SOLUTIONS

Wall thermostat does not work correctly in a Master / Slave set up or single heater.

Check that you have turned up fully the inbuilt thermostat on the back of the heater as this will turn off the heater if set to a lower temperature than the wall thermostat.

Single heater won't turn on from new.

Check that you have fitted any required links – See section 7 (page 11), also check you have set the Pre-Heat Controller – See page 5.

I have a OUH3-S heater control switch it is set to "OFF" but the heaters are still coming on.

This will happen if you have a Frost Thermostat fitted as it overrides everything to help protect your building from damage by cool temperatures.

Can I add different controllers or additional heaters at a later date?

Yes you can add additional controllers or additional OUH3 heaters at a later date. Contact you electrician or electrical wholesale for further information.

Why does one heater turn on using a Master / Slave set up but the others stay off?

If you are using the internal thermostat in the heaters this is perfectly normal and one of the new advance features. Each heater turns on / off on its own thermostat so that if one heater was mounted near an outside door or in a cooler part of the building it would turn on more often. The remaining heaters in the warmer areas would stay off. The OUH3-S heater control switch overrides all internal thermostats and turns off every heater.

I need help!

If you have read these instructions and still need help please call us on the number on the back page during office hours and our technical department will assist you. Please have these instructions in front of you when calling as this will assist us in helping you.

11. MAINTENANCE

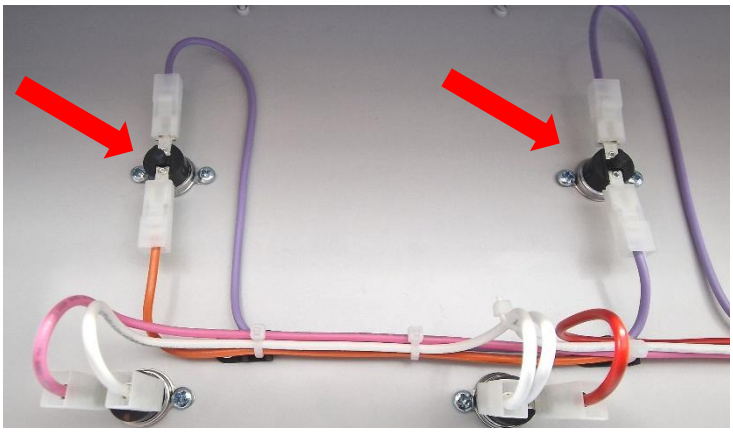
Note: Before examining or carrying out any maintenance, ensure the heater has cooled down and is disconnected from the mains supply. Due to the design of this heater, there may be two different feeds if so ensure both are disconnected from the mains supply.

The heaters are intended to operate for many years, problem-free. All moving parts are factory lubricated and therefore should require no service. Maintenance is limited to keeping both the inlet and outlet areas free from any accumulation of dust or any other foreign materials. This is especially important immediately before the heating season. Any dust build up can be loosened using a brush and a vacuum cleaner applied to the airways to ensure completed removal of any dust. A regular visual inspection of the heating elements is also recommended. When the heater is first turned on after cleaning an unusual odour may be noted. This is due to the dust particles which inevitably will be disturbed and will be burnt off from the heating element. **If in any doubt always consult a qualified electrician for advice.**

12. MANUAL RESET CUT-OUTS

The following should only be carried out by a qualified electrician.

This heater is fitted with manual resettable safety devices to prevent overheating. The devices are located inside the electrical control box and will stop the contactors from working until they are reset. The contactors turn the heating elements on and off. Under normal conditions and operation these cut-outs should never operate. Should the cut-outs operate, disconnect the heater from the mains supply. Be aware that the heater may be fed from two different supplies. Wait for a minimum of 5 minutes to allow the heater to cool down, check and remove any foreign materials around the airways. Now reset the cut-outs by pressing the black knob on the top. Only one may have tripped. If the problem persists, please contact us.



13. IMPORTANT NOTES REGARDING SPACE HEATING – PLEASE READ BEFORE INSTALLING

Total output

It is vital that the combined output of the heaters exceeds the heat losses from the entire area you are heating. If you are in any doubt, please contact BN Thermic and we can carry out a quick check for you.

Temperature rise

OUH3 industrial fan heaters warm a space by circulating large volumes of air. The temperature rise across the heater is often barely detectable. This is normal for this style of heater and does not indicate a fault. Our customer service advisers would be happy to talk through this characteristic of industrial fan heaters if clarification is needed.

Now you have read and accepted the above points, please continue with your installation by reading through the instructions first. Any questions you may have call our customer service advisors who will be delighted to help you.

NOTE: *It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.*



WEEE REGULATIONS:

This appliance bears the symbol of the crossed waste bin. This indicates that, at the end of its useful life, it must not be disposed of as domestic waste, but must be taken to a collection centre for waste electrical and electronic equipment. It is the user's responsibility to dispose of this appliance through the appropriate channels. Failure to do so may incur penalties established by laws governing waste disposal.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Your BN Thermic product is guaranteed for a period of five years from date of purchase assuming standard comfort heating application. Our warranty does not cover corrosion or incorrect installation. We will repair or replace at our discretion any part found to be defective. We cannot assume any consequential liability. This guarantee in no way prejudices your rights under common law and is offered as an addition to consumer liability rights.

REGISTER: Activate your warranty by registering online at www.bnthermic.co.uk and retain this installation data for future reference.

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