Reference Manual

Apollo

Mk.2

EU MODELS

**SHORTWAVE INFRARED HEATERS FOR INDOOR USE -
RESIDENTIAL, COMMERCIAL AND INDUSTRIAL
IN NON-HAZARDOUS LOCATIONS AND SHOULD BE USED IN
CONJUNCTION WITH SUITABLE ENERGY SAVING CONTROLLERS
TO COMPLY WITH EU 2015/118 (PLEASE CONTACT TANSUN FOR DETAILS)**

*Heaters rated over 2000W are not suitable for indoor residential or household use.

CE

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CAUTION

When using Tansun electrical heaters, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

Read all instructions before using this heater.

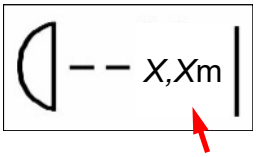
- Before using this appliance:
  - Check that the voltage indicated on the type plate corresponds to the mains supply voltage.
  - Ensure that the heater has been securely fastened in its final mounting position.
- Do not locate the heater immediately below a socket outlet.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Children of less than 3 years should be kept away unless continually supervised.
- Children aged from 3 years and less than 8 years shall only switch on/ off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- **CAUTION - Some parts of the product can become very hot and cause burns. Particular attention has been given where children and vulnerable people are present.**
- Remove the plug from the mains socket (or disconnect pole switch) during installation, cleaning and/or replacing the element and always ensure that any lamp emitters are cool.
- The heater is designed for indoor use and should only be installed in conjunction with a suitable energy saving controller. Please contact Tansun for a controller for this application.

- Do not use an extension cord with this product because the extension cord may overheat and cause a risk of fire.
- Keep the mains supply cord away from the body of the heater which will get hot during use.
- Arrange the mains supply cord so it cannot be tripped over or damaged.
- Do not cover or obstruct the heater while it is in use.
- Do not insert any object through any slot or opening in the heater.
- Do not use if a guard is not present (unless specified without for high mounting).
- Do not install less than the minimum mounting distance from the floor.
- **WARNING:** This heater should only be installed with an energy saving device to control the room temperature and operated by users capable of using the device. 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.
- This heater is for indoor use only - do not install outdoors or use the heater in a damp area, for example a bathroom, laundry areas and similar locations or near to a swimming pool. Never locate the heater where it may fall into a bathtub or other water container.
- Do not expose to rain, snow, etc.
- A heater has hot parts inside. Do not use it in areas where petrol, paint, or flammable liquids are used or stored.
- **WARNING:** This appliance must be connected to a supply that is earthed! ⏚

IMPORTANT -
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

⚠ WARNING: RISK OF FIRE ⚠

Keep combustible material such as furniture, papers, clothes and curtains the safe distance as marked on the heater from the front of the heater and away from the sides and rear.



See on heater label

INTRODUCTION

The Apollo indoor heater produces radiant heat like the sun, warming people and objects and not the air in between, providing the only form of heat that will not blow away. It is designed to blend into environments old and new, providing a cost effective, pollution free heater.

Please read the caution notes and following instructions carefully before use. The safety of this heater is guaranteed only by its correct usage in accordance with these instructions, therefore it is recommended that they are retained for future reference.

INSTALLATION

The models A1A2-010NP, A1A2-015NP, A1A2-020NP, A1B2-020NP, A1B2-030NP and A1C2-030NP are fitted with 2,0 meters of supply cord for hard wiring (directly into a control device) therefore it is unnecessary to remove the terminal cover plate in order to carry out normal installation of these models. They can also be specified with 3,0 meters of supply cord and a moulded plug (at an additional cost) for plug connection into socket type control devices. Again it is unnecessary to remove the terminal cover plate in order to carry out normal installation of these models.

All other models have a terminal box in which the mains supply cord can be connected from a control device.

⚠ **WARNING:** This appliance must be earthed! ⏚

⚠ **WARNING:** If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

⚠ **CAUTION:** Please observe the minimum safe distance between the heater body and any inflammable surfaces.

⚠ **CAUTION:** All installations must be in accordance with the latest electrical safety regulations. **If in any doubt, please consult a suitably qualified electrician.**

! **NOTE:** When hard wiring, a large double pole switch with a 3,0mm contact disconnection should be fitted.

! **NOTE:** We recommend using a RCD where applicable.

SPECIFICATION

Table 1. Single Phase EU Heaters

Model	Voltage (V)	Lamps × Power (kW)	Total Power (kW)	Phase Supply	Current per Phase (A)	Minimum height from floor (cm)	Minimum distance from ceiling (cm)	Minimum Distance from side wall (cm)	Dimensions (L × W × D) (cm)	Weight (kg)
A1**A**2-010NP	230	1 × 1,0	1,0	1	4,3	200	30	100	42 × 26 × 12	3,1
A1**A**2-015NP		1 × 1,5	1,5		6,5					
A1**A**2-020NP		1 × 2,0	2,0		8,7					
A1**A**X-020NP						250			60 × 26 × 12	5,9
A1**B**2-020NP	230	2 × 1,0	2,0	1	8,7	200	50	150	42 × 39 × 12	4,1
A1**B**2-030NP		2 × 1,5	3,0		13,0					
A1**B**2-040NP		2 × 2,0	4,0		17,4	250				
A1**C**2-030NP	230	3 × 1,0	3,0	1	13,0	200	50	150	42 × 53 × 12	5,7
A1**C**2-045NP		3 × 1,5	4,5		19,6	250				
A1**C**2-060NP		3 × 2,0	6,0		26,0	300				
A1**J**2-020NP	230	2 × 1,0	2,0	1	8,7	250	50	100	86 × 26 × 12	6,1
A1**J**2-030NP		2 × 1,5	3,0		13,0					
A1**J**2-040NP		2 × 2,0	4,0		17,4					
A1**J**X-040NP									122 × 26 × 12	11,9
A1**K**2-030NP	230	3 × 1,0	3,0	1	13,0	250	50	150	128 × 26 × 12	8,2
A1**K**2-045NP		3 × 1,5	4,5		19,6					
A1**K**2-060NP		3 × 2,0	6,0		26,0	300				
A1**K**X-060NP									182 × 26 × 12	8,8

Note: Use MCB Type C.

SPECIFICATION

Table 2. Three Phase EU Heaters

Model	Voltage (V)	Lamps × Power (kW)	Total Power (kW)	Phase Supply	Current per Phase (A)	Minimum height from floor (cm)	Minimum distance from ceiling (cm)	Minimum Distance from side wall (cm)	Dimensions (L × W × D) (cm)	Weight (kg)
A3**C**2-030NP	400	3 × 1,0	3,0	3*	4,3	200	50	150	42 × 53 × 12	5,7
A3**C**2-045NP		3 × 1,5	4,5		6,5	250				
A3**C**2-060NP		3 × 2,0	6,0		8,7	300				
A3**E**2-060NP	400	6 × 1,0	6,0	3*	8,7	300	50	150	86 × 63 × 12	12,8
A3**E**2-090NP		6 × 1,5	9,0		13,0	400				
A3**E**2-120NP		6 × 2,0	12,0		17,4	450				
A3**F**2-090NP	400	9 × 1,0	9,0	3*	13,0	400	50	150	128 × 63 × 12	20,6
A3**F**2-135NP		9 × 1,5	13,5		19,6	500				
A3**F**2-180NP		9 × 2,0	18,0		26,1	600				
A3**K**2-030NP	400	3 × 1,0	3,0	3*	4,3	250	50	150	128 × 26 × 12	8,2
A3**K**2-045NP		3 × 1,5	4,5		6,5					
A3**K**2-060NP		3 × 2,0	6,0		8,7	300				
A3**K**X-060NP									182 × 26 × 12	8,8
A3**L**2-060NP	400	6 × 1,0	6,0	3*	8,7	300	50	150	128 × 44 × 12	17,4
A3**L**2-090NP		6 × 1,5	9,0		13,0	400				
A3**L**2-120NP		6 × 2,0	12,0		17,4	450				

Note: *Use MCB Type C.* **Star connection with neutral star point to balance load.*

MOUNTING - WALL MOUNTED

CAUTION

Disconnect the heater from the mains power supply when mounting or adjusting the heater position.

- The heater must be mounted in such a way that the halogen lamp does not slant more than 4° from the horizontal, when viewed from the front.
- The heater is suitable for installation only on a normally non-flammable surface. Observe the minimum safe distance between the heater body and inflammable surfaces when mounting.
- Do not position the heater near to furniture or curtains as this could present a fire hazard.
- Refer to Table 1 or 2 for the recommended mounting height for the heater.
- Please refer to Table 1 or 2 for the recommended installation height of the heater.
- Keep out of the reach of children.

Plan View

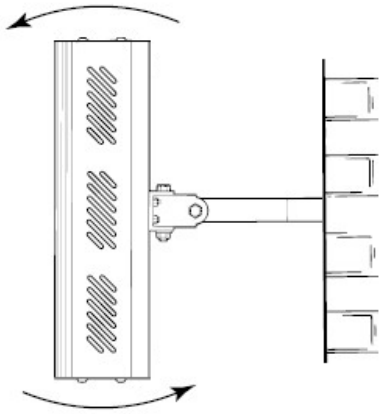


Fig. A

Side View

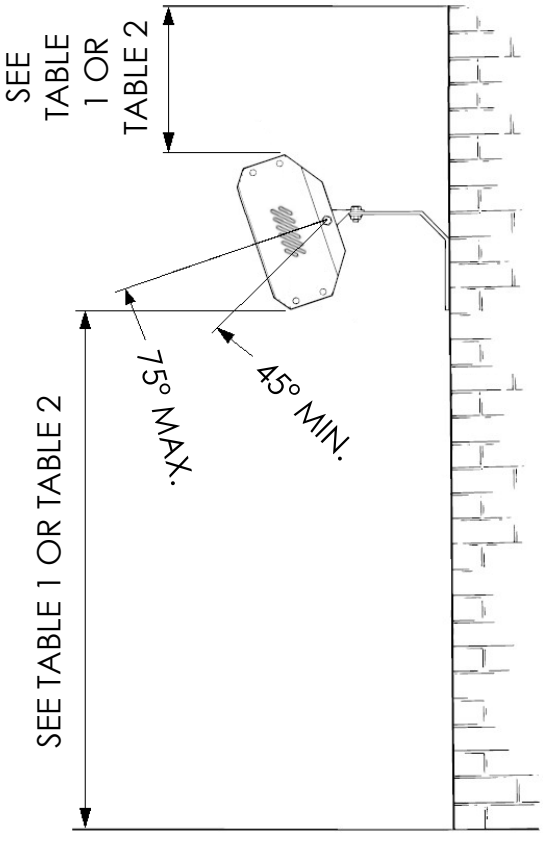


Fig. B

1. Separate the heater from the mounting bracket by loosening the two nuts at the rear of the heater.

2. Securely fasten the bracket to the mounting surface using the fixing holes in the bracket.

3. Replace the heater on the bracket using the nut and bolt supplied and fix in the required angular position by tightening the fixing bolt on the bracket. See Figs A and B.

Always isolate the heater from the mains supply when adjusting the angular position.

MOUNTING - CHAIN HUNG

CAUTION

Disconnect the heater from the mains power supply when mounting or adjusting the heater position.

- The heater is suitable for installation on chains that are suitably fixed to a structure sufficient to hold the weight of the heater. Observe the minimum safe distance between the heater body and inflammable surfaces when mounting.
- Please refer to Table 1 or 2 for the recommended positioning of the heater with regards to minimum distances. Do not install the heater in a corner! If installing near a corner, always ensure minimum side wall distance is adhered to.
- The heater must be mounted in such a way that the halogen lamp does not slant more than 4° from the horizontal, when viewed from the front.
- Do not position the heater near to furniture or curtains as this would present a fire hazard.
- Always allow the heater to cool before attempting to reposition/move. Never attempt to move the heater while it is switched on!

1. When chain hung, ensure chains are of adequate size and securely fixed to support the weight of the heater.

2. Fix the heater assembly to the chains via the holes in the body bracket(s) as shown in Fig. C and Fig. D.

3. Ensure the supply cord does not rest on the heater.

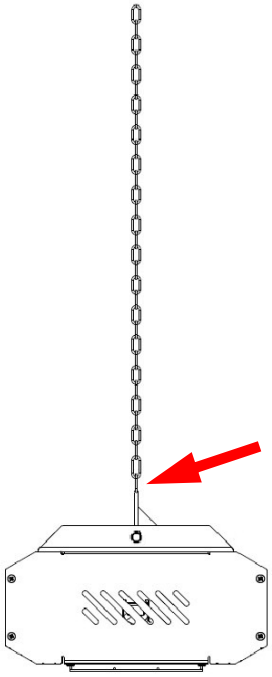


Fig. C

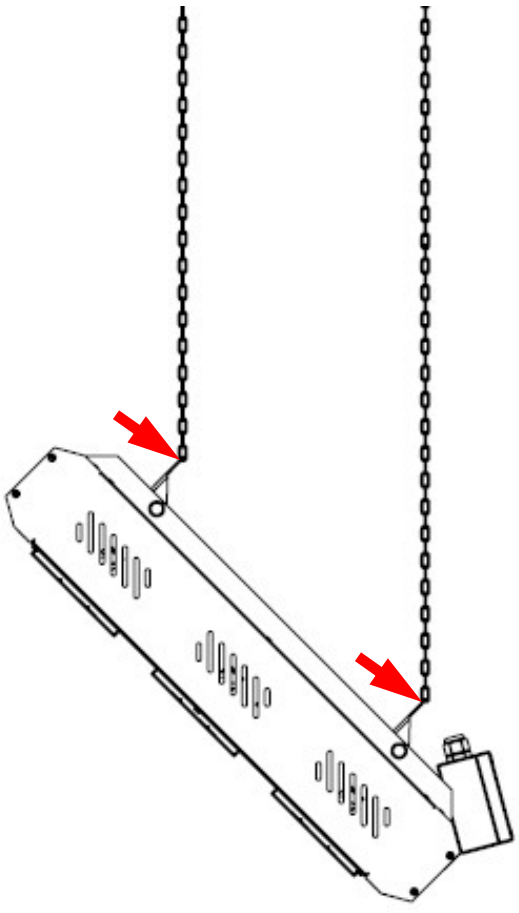


Fig. D

JOINING - LINEAR BODIES

CAUTION

Disconnect the heater from the mains power supply when mounting or adjusting the heater position.

The 'linear XL' heater model - A1A2, A1JX, A1KX and A3KX can be joined together to one other heater (double assembly) using JOINING BARS FOR DOUBLE: part no. 0064393 (1 - OFF for A1A2, 2 - OFF for others) or two other heaters (triple assembly) using JOINING BARS FOR TRIPLE: part no. 0064394 (1 - OFF for A1A2, 2 - OFF for others).

DOUBLE ASSEMBLY (model shown is A1KX/A3KX)

1. Take the first heater and place it face down on a flat surface with protection to not damage the heaters.

2. Remove the swivel bracket(s) from the back of the heater by removing the M8 Nyloc nuts and sliding the M8 screws through taking care to retain washers and spacers (Fig. E).

3. Slide the joining bar(s) into the channel bracket(s) from the same side as the terminal box (Fig. F) and refit the M8 screws, M8 nuts and washers with the spacer tube(s) in the gap (Fig. G) and fully tighten.

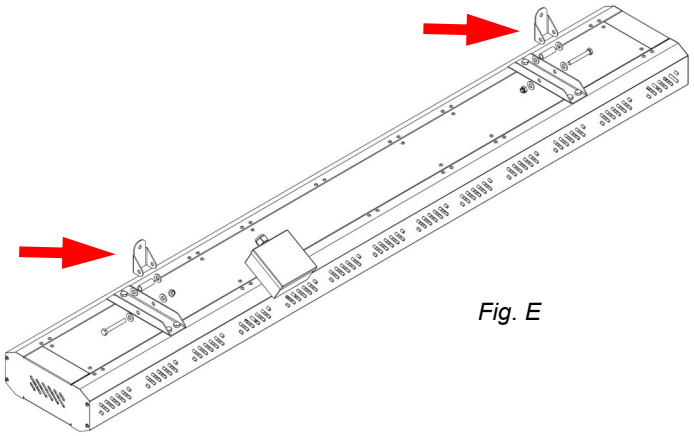


Fig. E

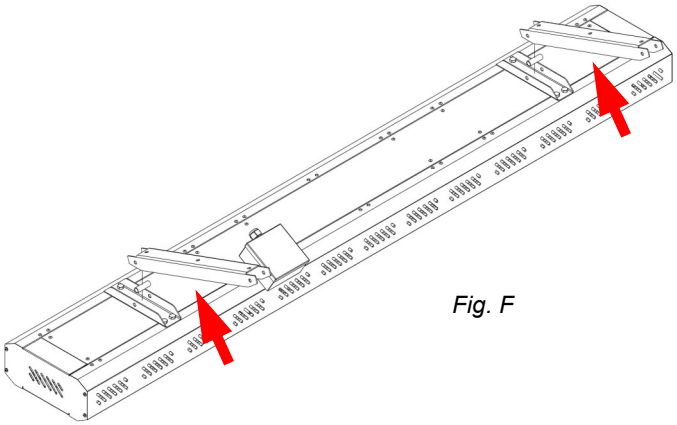


Fig. F

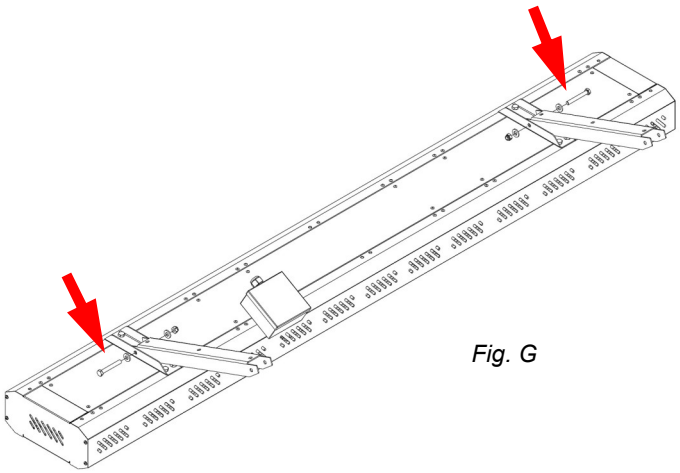


Fig. G

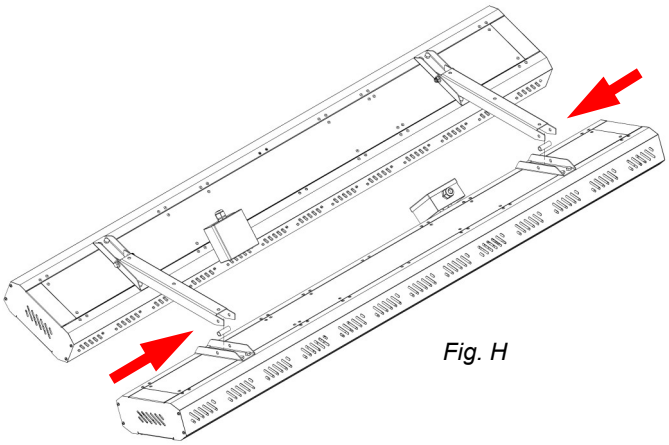


Fig. H

4. Take the second heater and as with the first, remove the swivel bracket(s) as per Fig. E.

5. Place the second heater opposite the first with the terminal box to the inside of the assembly and tilt over to align the holes in the joining bars with the channel brackets (Fig. H).

Continued...

6. Refit the M8 screws, washers (outside only), spacers and Nyloc nuts ensuring full tightness (Fig. I).

7. The heater is now ready for mounting (Fig. J). See page 12 for mounting instructions.

Note. Tansun can supply this arrangement as an assembly under model codes: A1AW, A1JW, A1KW and A3KW.

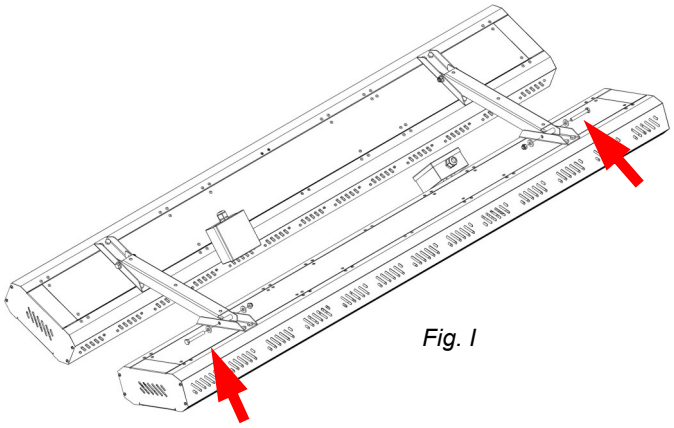


Fig. I

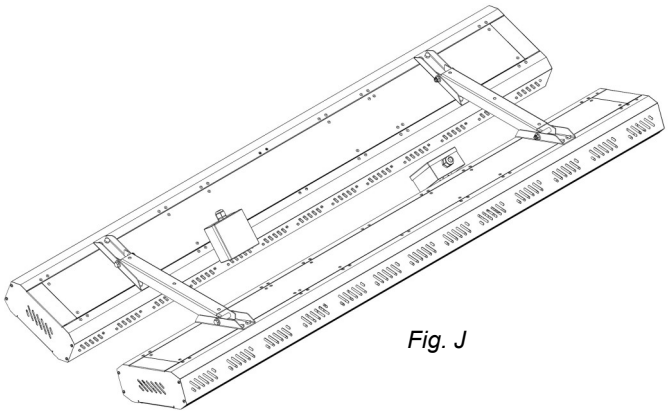


Fig. J

TRIPLE ASSEMBLY (model shown is A1KX / A3KX)

1. Take the first heater and place it face down on a flat surface with protection to not damage the heaters.

2. Remove the swivel bracket(s) from the back of the heater by removing the M8 Nyloc nuts and sliding the M8 screws through taking care to retain washers and spacers (Fig. E).

3. Slide the joining bar(s) into the channel bracket(s) and locate the centre holes in the bars with the holes in the channel bracket(s) (Fig. K) and refit the M8 screws, M8 nuts and washers with the spacer tube in the gap and fully tighten (Fig. L)

4. Take the second heater and as with the first, remove the swivel brackets as per Fig. E.

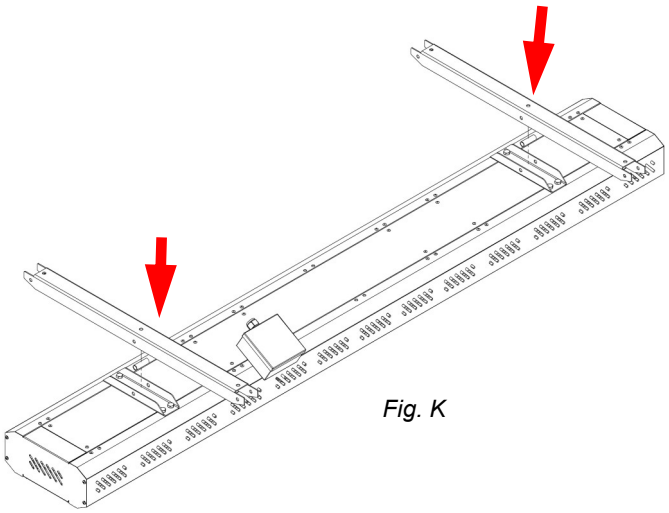


Fig. K

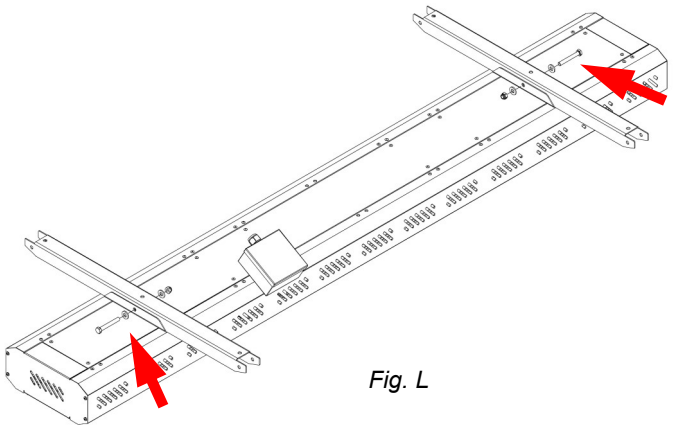


Fig. L

Continued...

5. Place the second heater opposite the first with the terminal box to the inside of the assembly and align the centre holes in the joining bar(s) with the channel bracket(s) (Fig. M) and refit the M8 screws, washers, spacers and Nyloc nuts ensuring full tightness (Fig. N).

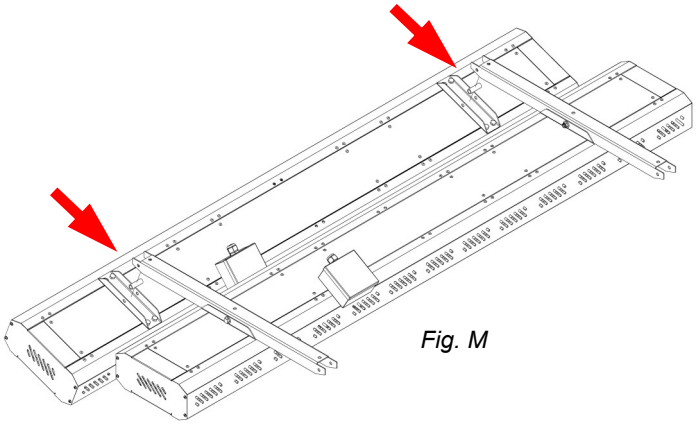


Fig. M

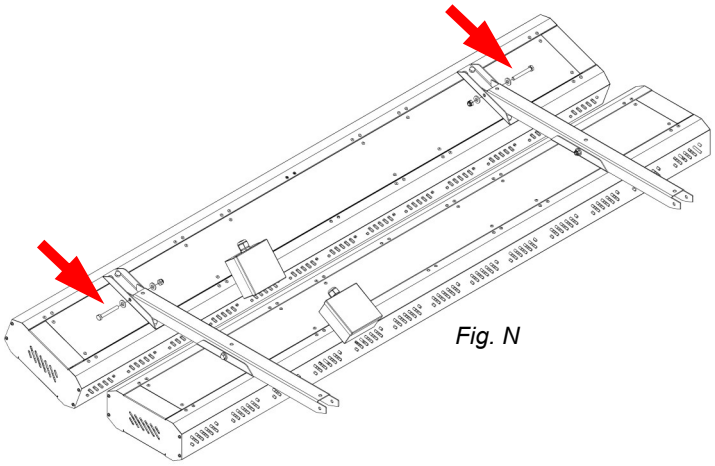


Fig. N

6. Take the third heater and as with the first and second, remove the swivel bracket(s) and retain the fasteners (Fig. E).

7. Place the third heater opposite the second with the terminal box to the inside of the assembly and tilt over to align the holes in the joining bar(s) with the channel bracket(s) (Fig. O) and refit the M8 screws, washers, spacers and Nyloc nuts ensuring full tightness (Fig. P).

8. The heater is now ready for mounting (Fig. Q). See page 12 for mounting instructions.

Note. Tansun can supply this arrangement as an assembly under model codes: A1AU, A1JU, A1KU and A3KU.

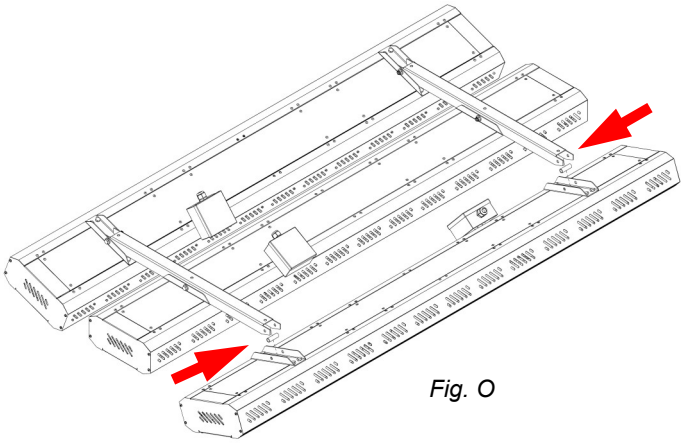


Fig. O

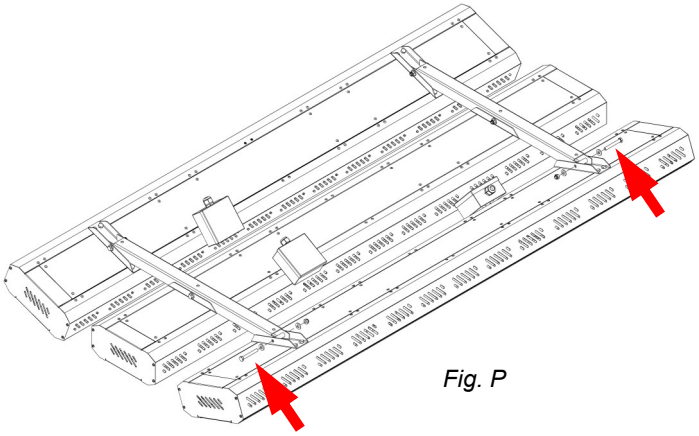


Fig. P

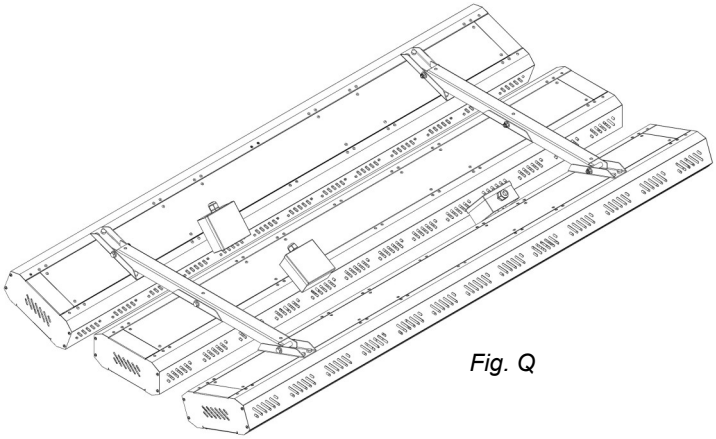


Fig. Q

MOUNTING - CHAIN HUNG

CAUTION

Disconnect the heater from the mains power supply when mounting or adjusting the heater position.

- The A1KW, A3KW, A1KU and A3KU heater assemblies are suitable for installation on chains that are suitably fixed to a structure sufficient to hold the weight of the heater. Observe the minimum safe distance between the heater body and inflammable surfaces when mounting.
- The heater must be mounted in such a way that the halogen lamp does not slant more than 4° from the horizontal, when viewed from the front.
- Please refer to Table 1 for the recommended positioning of the heater with regards to minimum distances. Do not install the heater in a corner! If installing near a corner, always ensure minimum side wall distance is adhered to.
- Do not position the heater near to furniture or curtains as this would present a fire hazard.
- Always allow the heater to cool before attempting to reposition/move. Never attempt to move the heater while it is switched on!

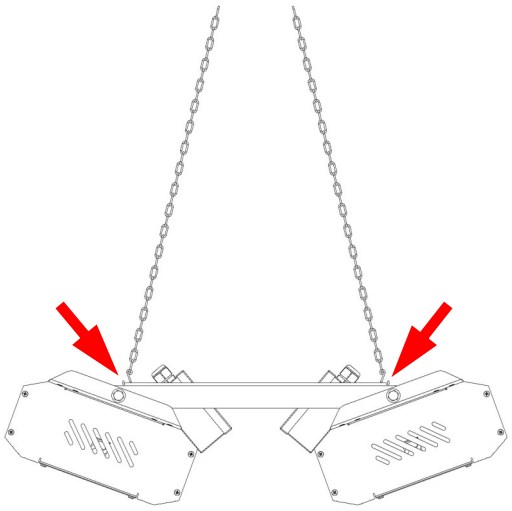


Fig. R

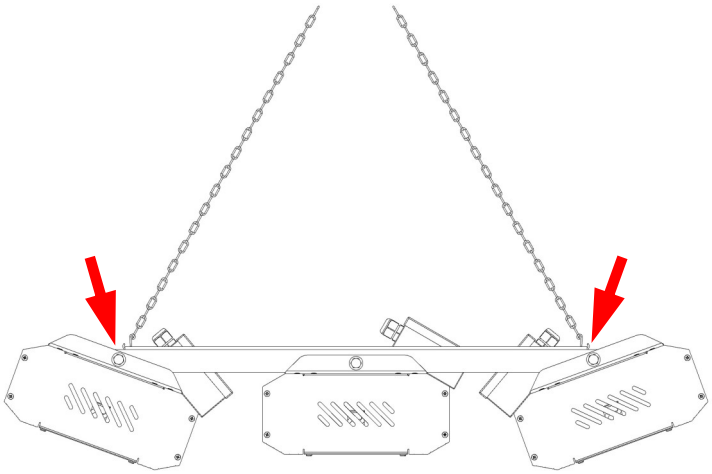
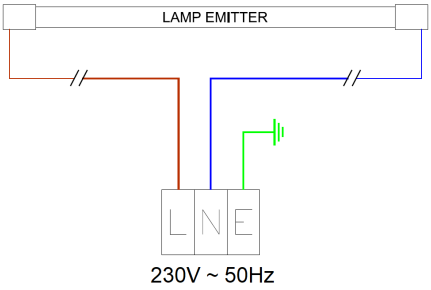


Fig. S

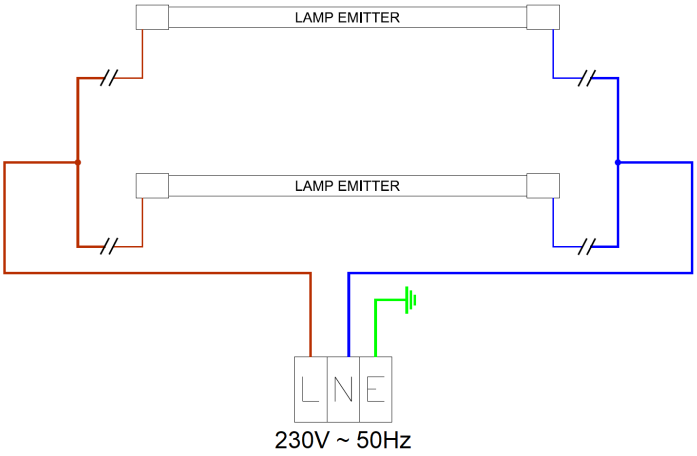
1. When chain hung, ensure chains are of adequate size and securely fixed to support the weight of the heater.
2. Fix the heater assembly to the chains via the holes in the joining bars as shown in Fig. R and Fig. S.
3. Ensure the supply cords do not rest on the heaters.

CIRCUIT DIAGRAMS

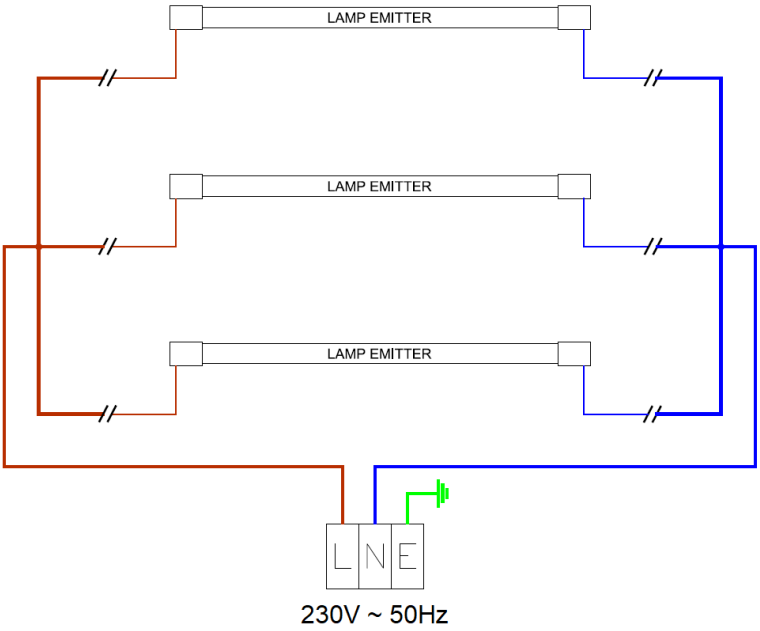
A1A2 & A1AX (SINGLE PHASE)



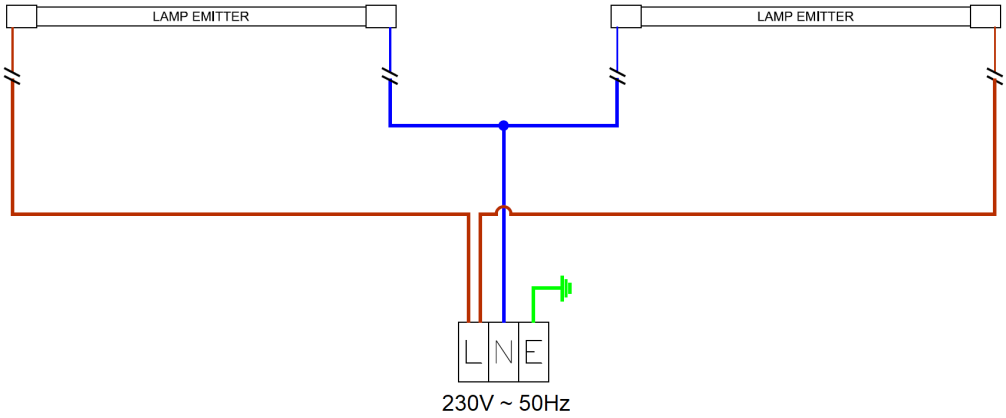
A1B2 (SINGLE PHASE)



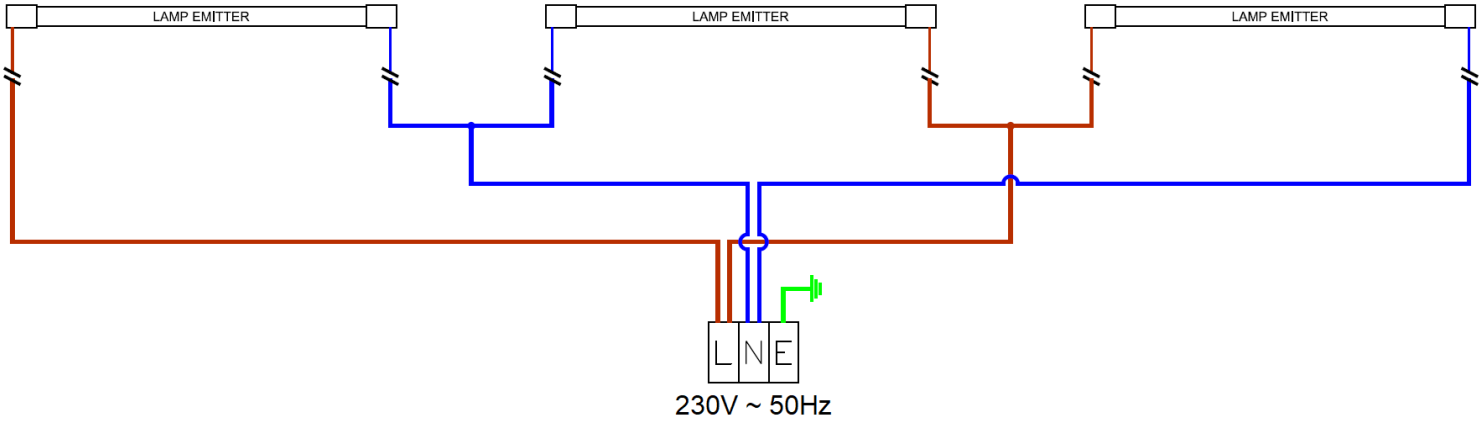
A1C2 (SINGLE PHASE)



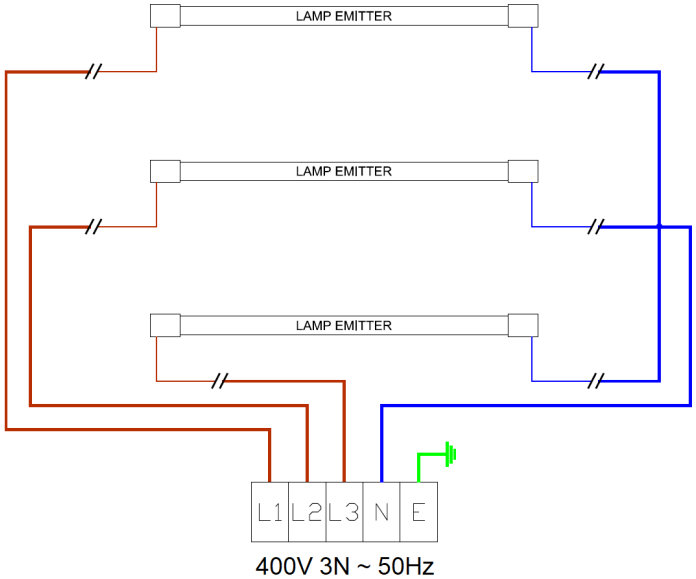
A1J2 & A1JX (SINGLE PHASE)



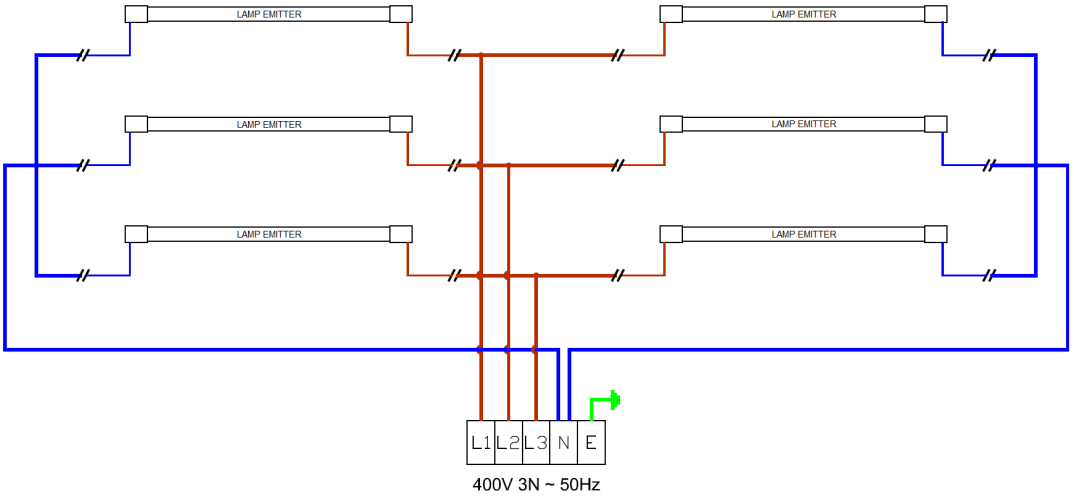
A1K2 & A1KX (SINGLE PHASE)



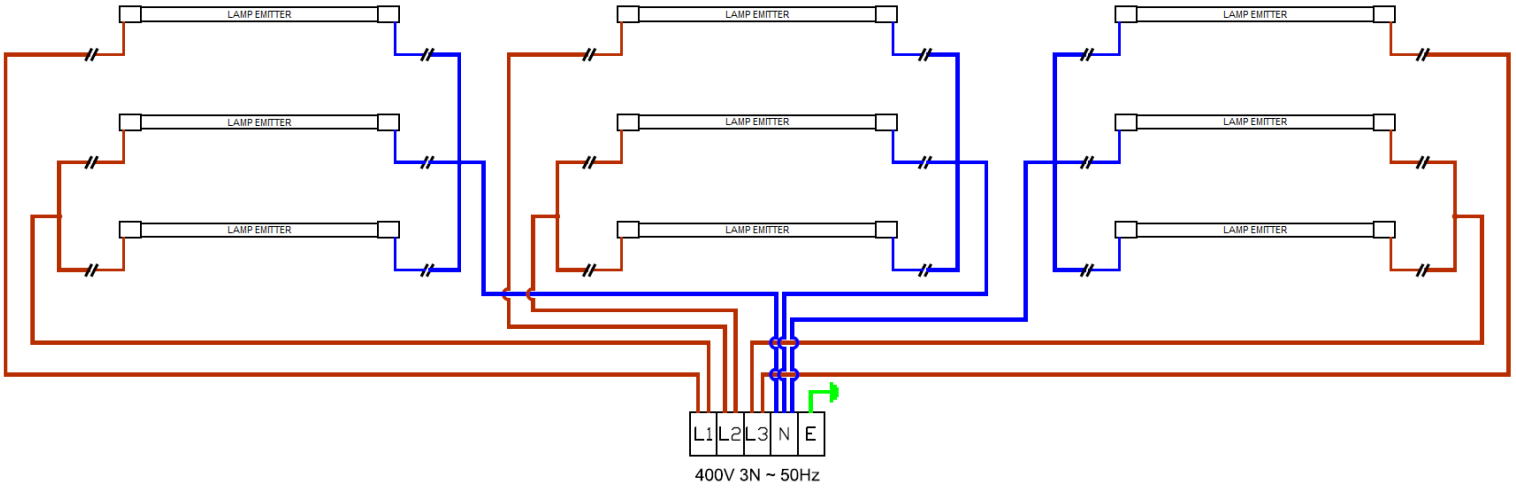
A3C2 (THREE PHASE)



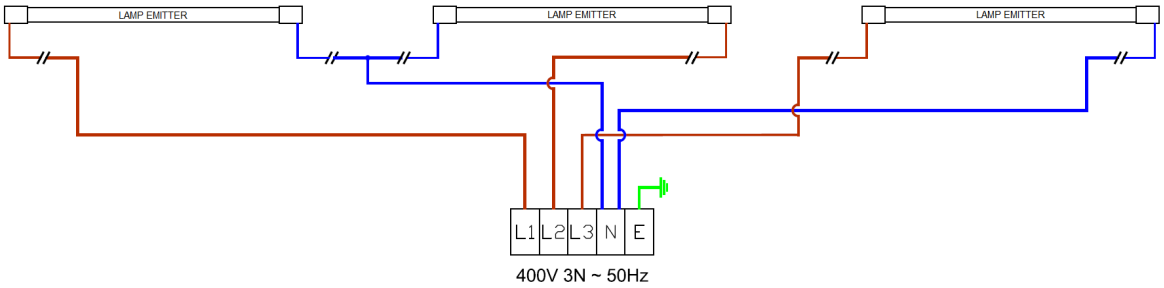
A3E2 (THREE PHASE)



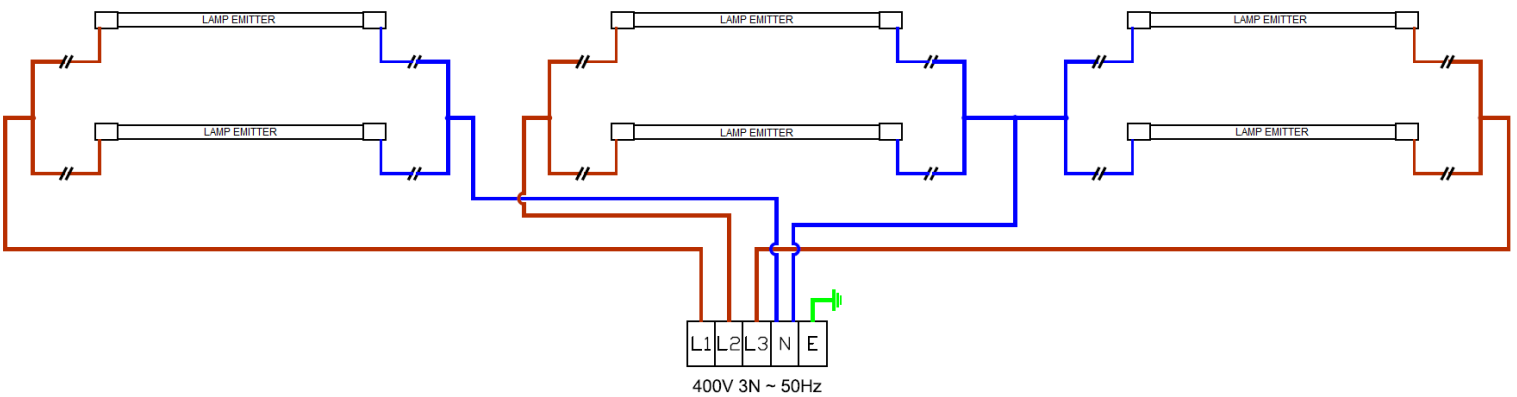
A3F2 (THREE PHASE)



A3K2 & A3KX (THREE PHASE)



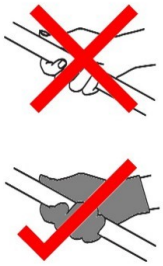
A3L2 (THREE PHASE)



YOUR REPLACEMENT LAMP EMITTER

It is very important that your replacement lamp emitter is exactly the same as the one it was supplied with. Failure to fit the exact same type could cause the heater to fail or even become dangerous especially when used in an outdoor environment. Please contact Tansun or your distributor to purchase your replacement lamp emitter and state the model number of the heater you wish to fit the lamp emitter to.

HANDLING A REPLACEMENT LAMP EMITTER



Your new lamp emitter(s) should not be handled with bare hands. Remove finger marks with a soft cloth and methylated spirits or rubbing alcohol. Finger marks will burn into the lamp emitters quartz glass causing premature failure.

REPLACING A LAMP EMITTER

CAUTION

Unplug/switch off from the mains power to the heater (including control device) before any attempts are made to replace a lamp emitter. Contact your service agent for the correct replacement lamp emitter quoting model type and rating from rating label. It is important that you read through the lamp emitter replacement procedure before commencing.

1. Disconnect the power supply to the heater.

2. Remove guard (where fitted) by flexing one end and releasing from its locating holes on the lamp to be replaced.

3. Remove the three screws from both front side covers (Fig. T) on the 'A, B & C' models and depending on the other models, the middle cover(s) will need to be removed by removing the screws from both sides as shown in Fig. U.

Fig. T

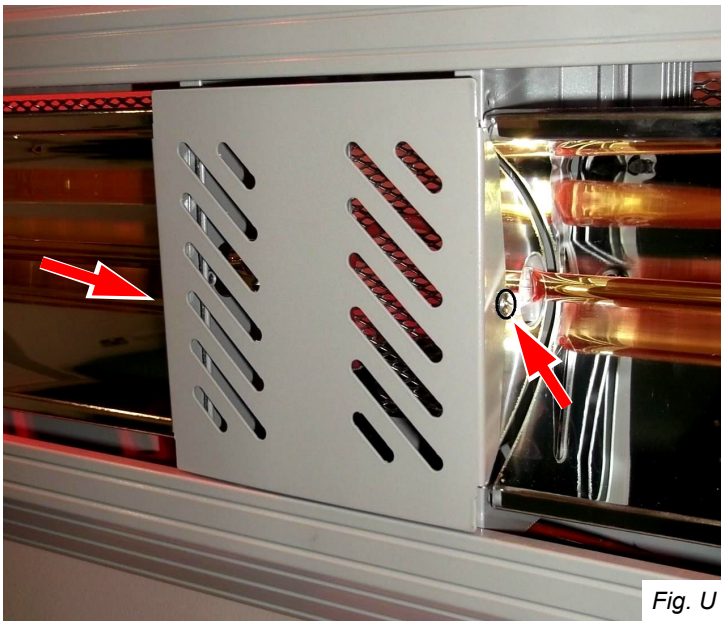


Fig. U

4. Locate the lamp emitter wire (Fig. V) and hold it by the terminal and pull up to release from tab (Fig. W). Repeat at other end.

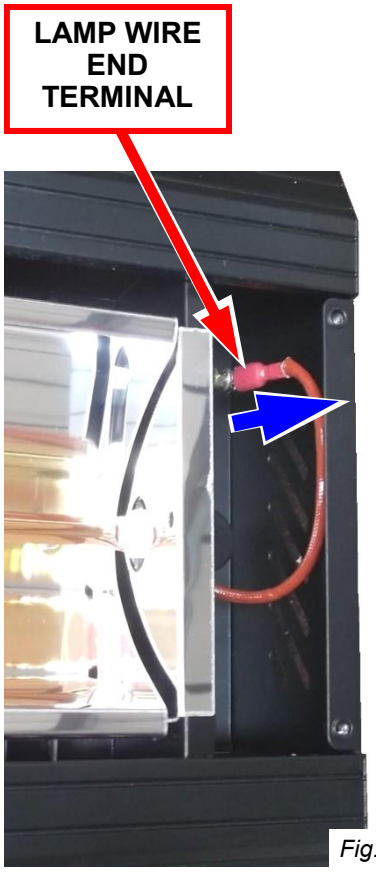


Fig. V

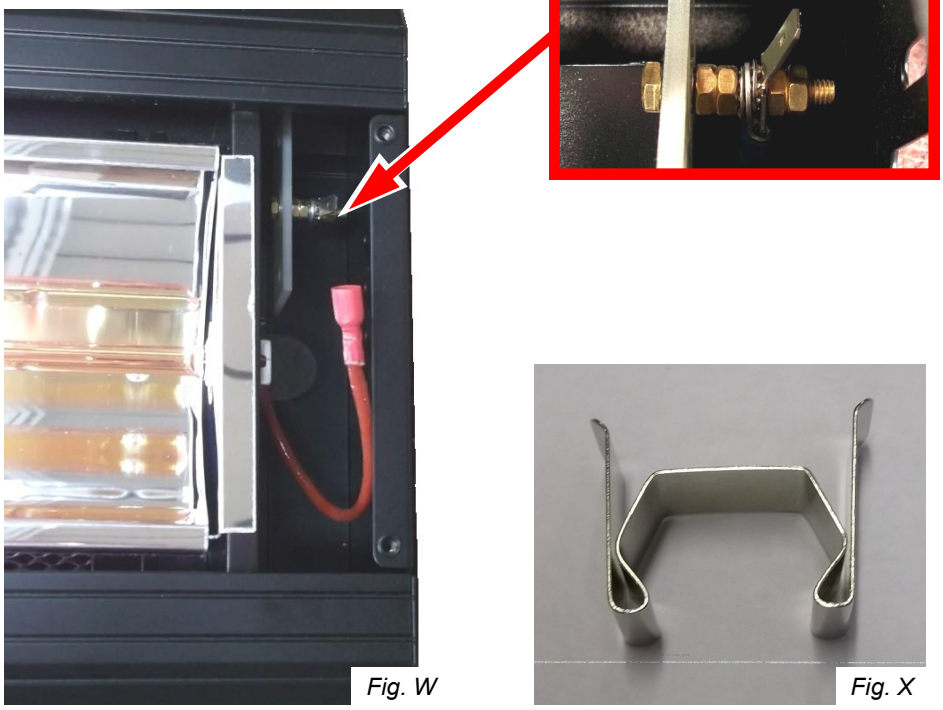


Fig. W

Fig. X

5. Remove the lamp emitter holding clips (Fig. X) by squeezing the clip together and lifting away as shown in Fig. Y.

6. Slide the lamp emitter out through the extrusion feeding one way first with the wire and then the opposite way to take out and remove. Take care not to scratch the reflector surface.

7. Refit the new lamp emitter. Take care not to mark the reflector or touch the new lamp with the hands (see note above).

8. Replace the lamp emitter holding clips. Make sure they are firmly in place over the white ceramic ends of the lamp emitter and pushed up to the aluminium opening.

9. Refit the lamp emitter wire terminals by fully pushing onto the tabs. Long nose pliers can be used to assist.

10. Replace the front side and or middle covers in reverse order and then refit the wire guard(s) if originally fitted.

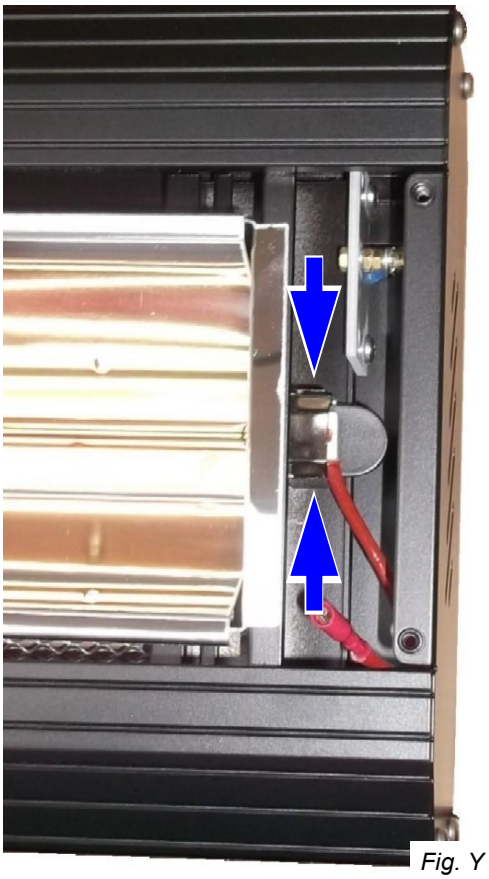


Fig. Y

Declaration of Conformity

We declare under our responsibility that the electrical products:

APOLLO Mk.2
HEATER RANGE

Model Numbers:

Apmg-xxxNP-yy-*

p = 1 Single Phase, 3 Three Phase
m = A A-Body, B B-Body, C C-Body, E E-Body, F F-Body, J J-Body, K K-Body, L L-Body
g = 2 2nd Generation (Mk.2), X XL Generation

xxx = 180	18000W	26,1A per phase (3N)
xxx = 135	13500W	19,6A per phase (3N)
xxx = 120	12000W	17,4A per phase (3N)
xxx = 090	9000W	13,0A per phase (3N)
xxx = 060	6000W	26,0A, 8,7A per phase (3N)
xxx = 045	4500W	19,6A, 6,5A per phase (3N)
xxx = 040	4000W	17,4A
xxx = 030	3000W	13,0A
xxx = 020	2000W	8,7A
xxx = 015	1500W	6,5A
xxx = 010	1000W	4,3A
yy = HW	Cord fitted for hard wiring	
yy = SW	No cord fitted for self wire	
yy = EU	Cord with EU plug	

* = suffixes indicate lamp, reflector colour and body colour options

Manufactured in the factory by:

TANSUN LTD.
SPECTRUM HOUSE, RIDGACRE ROAD
WEST BROMWICH
B71 1BW
ENGLAND UK

Comply with harmonized standards and the provisions of EC directives:

EN 60335-2-30:2009 + A11:12 in collaboration with
EN 60335-1:2012/AC:14 + A1:20 + A11:14 + A12:20 + A13:17
EN 62233:2008
LVD 2014/35/EU
WEEE & RoHS Directives 2011/65/EU
EU 2015/118 when used with a suitable control device

The product is developed and manufactured according to our ISO 9001:2015 quality system.
The product is tested during production on function and safety.
The product is documented according to the product code.

Responsible and authorised for this product:

TANSUN LTD.
SPECTRUM HOUSE, RIDGACRE ROAD
WEST BROMWICH
B71 1BW
ENGLAND UK

CE

Ref: 043287-EU Rev. A

PRODUCT GUARANTEE - PLEASE READ CAREFULLY

This product carries a full 24 month warranty from original date of purchase when used in accordance with these instructions. This excludes lamp* when used in a commercial application which then carry a 30 day warranty from original date of purchase. This is subject to the heater being installed correctly. Should you be in any way uncertain, please call our CUSTOMER HELPLINE on +44 (0)121 580 6200 between 9.00am and 5.00pm (GMT) Monday to Friday. Please quote the serial number, model number, rating and date/place of purchase.

Should your product be faulty, please contact the distributor your purchased it from in the first instance.

Always retain your receipt as proof of purchase.

*(excludes breakages)

DISPOSAL INFORMATION

The use of this symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local council, your household waste disposal service or the shop where you purchased the product.

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Due to our policy of ongoing improvement, we reserve the right to make changes without notice.
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Ref No. 042121-EU *Rev. G*