

Figure 1: Connection Diagram for 3 x 2KW Loads:

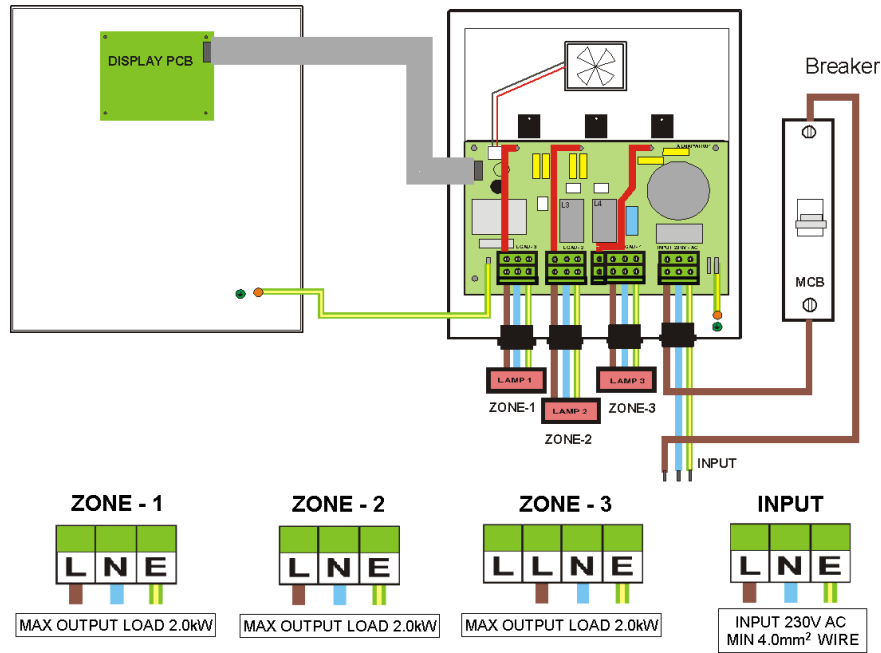
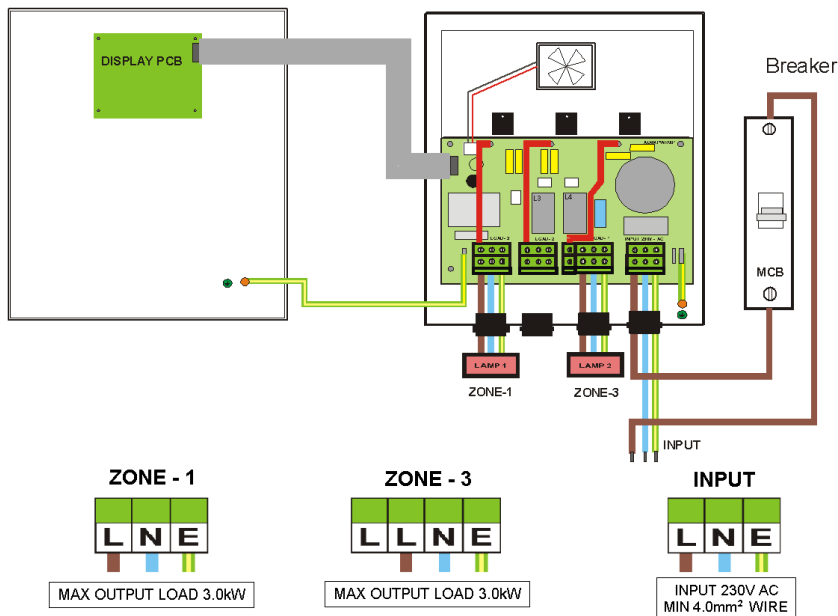


Figure 2: Connection Diagram for 2 x 3kW Loads:



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TANSUN QUARTZHEAT

Reference Manual

# Controller

MODEL  
6kW



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## Introduction

Tansun's unique variable controller enable the output from Tansun's heaters to be varied between 30 – 100%, as the ambient temperature varies and user preference dictates. Using proven micro-processor technology the controllers are easy to install, allowing efficient energy savings as well as maximum user comfort.

**Please read the enclosed instructions carefully before use. The safety of this controller is guaranteed only by the correct usage in accordance with these instructions, therefore it is recommended that they are retained for future reference.**

## Controller System

The Quartzheat controller system consists of two main parts:

### 1. Main base unit

Designed for indoor wall mounting.  
Power stand-by key.  
Increment/decrement key.  
Individual zone lamp stand-by control with digital keys.  
Zonal lamp stand-by indication LED's.  
Easy to connect.  
One Input connector.  
Three output connectors for connecting three loads.

Table 1: Specification

Main base unit	
Model	6kW
Input voltage	230V (50/60Hz)
Output voltage	230V variable from 30%-100% (70V to 230V) of input voltage
Maximum output load	6kW Total (2 x 3kW or 3 x 2kW)
Input breakers for connection	21A, type 3 MCB
Fuse on PCB	1A
IR receiver for remote control	38 KHz, 1Kbps, directivity: +/- 450
Input current range	21A Max
Input cable	3 core - 4.0mm <sup>2</sup> Minimum
Output cable	3 core - 2.5mm <sup>2</sup> for 3kW load, 1.5mm <sup>2</sup> for 2kW loads
Keyboard type	6 key tact switch type
Output control switch	Three separate digital switches
Output zone lamp indications	Red LED
Display type	Red LED seven segment display
Dimensions (l x w x h)	290mm x 240mm x 80mm
Weight	3.5kg

### 2. Remote control

6m (20ft) remote range coverage  
Power ON/OFF  
Increment/decrement keys  
Zone 1 stand-by key  
Zone 2 stand-by key  
Zone 3 stand-by key  
Long battery life

Table 2: Specification

Remote control	
Model	6kW
Remote type	6 key tact switches: stand-by, increment, decrement zone 1, zone 2, zone 3 on/off control.
Input voltage (batteries)	3V UM3 type, 2 x 1.5V AA Type
Output	IR 36KHz RC5 Protocol
Transmission distance	Approx. 6m (20ft)
Dimensions (l x w x h)	160mm x 40mm x 20mm
Weight	90g

## Connection

**Tansun recommend that installation of this product should be carried out by a professional electrician with compliance to IEE regulations.**

Please refer to figures 1 and 2 for guidance on connecting the heater controller.

1. Connect the heaters to the load connectors - zone 1, zone 2 and zone 3 with a maximum of 2KW to each load connector as show in Fig. A. Alternatively you can connect two 3kW heaters to the load connectors - zone 1 and zone 3 as show in Fig B.
2. Connect the 230VAC/50Hz input supply to the input connector through the circuit breaker (21A).
3. Use the circuit breaker between the live (L) of input cord and input connector.
4. Install the main base unit so that its front display is in the direction of the remote control and so there is no obstruction to the remote control's IR ray.
5. Connect the heaters to the load connectors using the correct cable sizes - see output cable in table 1.
6. Press the stand-by (o/i) key to switch on the controller. The controller display shows 30 which indicates the heater intensity is set at 30% of its maximum power.
7. Press the zone keys to turn on or off stand-by mode the different zones on the main unit or on the remote control.
8. User can change the intensity by pressing the + or - keys on the main unit or on the remote control using increment or decrement key.

Note:

The controller has a cooling fan that constantly runs as long as there is mains power going to the controller. This is because there is a coil inside that gets hot when powered - even when the heaters are not illuminated. To switch the controller off completely, the recommended MCB should be switched off (if in a suitable position) or an isolator switch (of suitable rating) should be installed between the MCB and controller at a more accessible position.

### Safety precautions:

- Connect the circuit breaker between the AC supply and the input connector.
- Completely disconnect the input AC supply while connecting or disconnecting output load to the controller.
- Ensure cover screws are tight and cable glands are fully tightened so cables are completely held and check they cannot be pulled out.
- Always isolate the mains power supply before carrying out maintenance work on the connected heaters i.e. replacing lamps or cleaning.
- **This appliance must be earthed!**