

# **Rako RAK4-T Instruction Manual**

*Before attempting to program a system refer to one of the following documents:*

RAK4 wireless RAK system setup guide (systems controlled by an RxLink)  
wired system setup guide (systems controlled by a RAKLink)

These guides are available for download from  
<http://rakocontrols.com/useful-information/> under the heading “setup guides”

## **Overview**

The Rako RAK4 system is designed for use as a single 4 channel dimmer pack or to be joined together create a 'stack' of up to a maximum of 4 RAKs when used with the wireless RxLink interface or 8 RAKs when using the wired RAKLink interface.

Whether forming a single 4 channel rack or multiples each assembly requires to be connected to an Rx Link receiver (wireless operation) or RAKLink (wired network). RAK4 systems can also be used seamlessly in conjunction with Rako's module range of dimmers.

Each RAK4 has a maximum capacity of 10A box load and the supply to each should be protected by an MCB with a current capacity of no more than 10A.

Each of the 4 circuits in a RAK4 has a maximum capacity of 1200w (5A) with a maximum of 1500w (6.25A) per heat sink pair (see Fig.2)

Channel 4 on each RAK has an auxiliary switched output marked 'S'. This output provides power whenever the output on channel 4 is set at any level above 50%. This output is useful for non-dimmed loads or for use with extract fans when dimmable bathroom lights can be connected to the dimmed output and the fan to the 'S' output, the extract fan will then come on whenever the lights are above a level of 50%.

Before commencing installation of a Rako dimmer module first read this instruction manual carefully.

Rako Controls Ltd accepts no responsibility for any damage or injury caused by incorrect installation of a Rako product.

Installation should only be carried out by a qualified electrician.

Always install RAK4 units in a well ventilated room, with a minimum clearance of 50mm on the sides in the correct orientation i.e. vents top and bottom.

Warning: Each RAK4 unit must be earthed.

## Installation

**Step 1** - Secure Case to wall or secure mounting position. The RAK4 system relies on being vertically mounted to allow the ventilation system to work properly.

**Step 2** - If multiple RAK4s are to be joined to form a larger 'stack' mount and join the other cases to join the original case using the connecting grommets (see Fig.1) cutting away enough plastic to allow cable access.

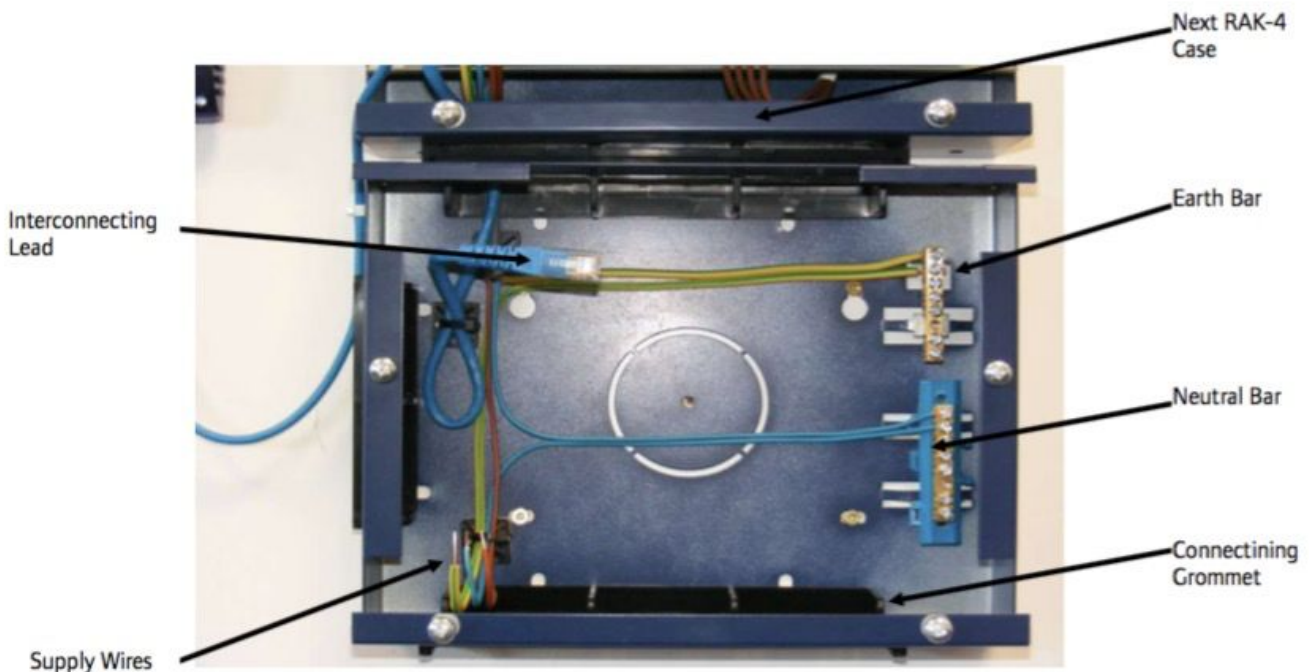
**Step 3** - Bring a separate 10A MCB protected supply to each RAK4 case. Connect the Earth and Neutral supply to the appropriate connector block and leave the Live ready to connect to the circuit board. Bring a feed from both the Earth and Neutral bars ready to connect to the circuit board (see Fig.1) Also feed the load Lives and prepare ready for connection to the circuit board and connect the load Neutral and Earths to the appropriate connector block.

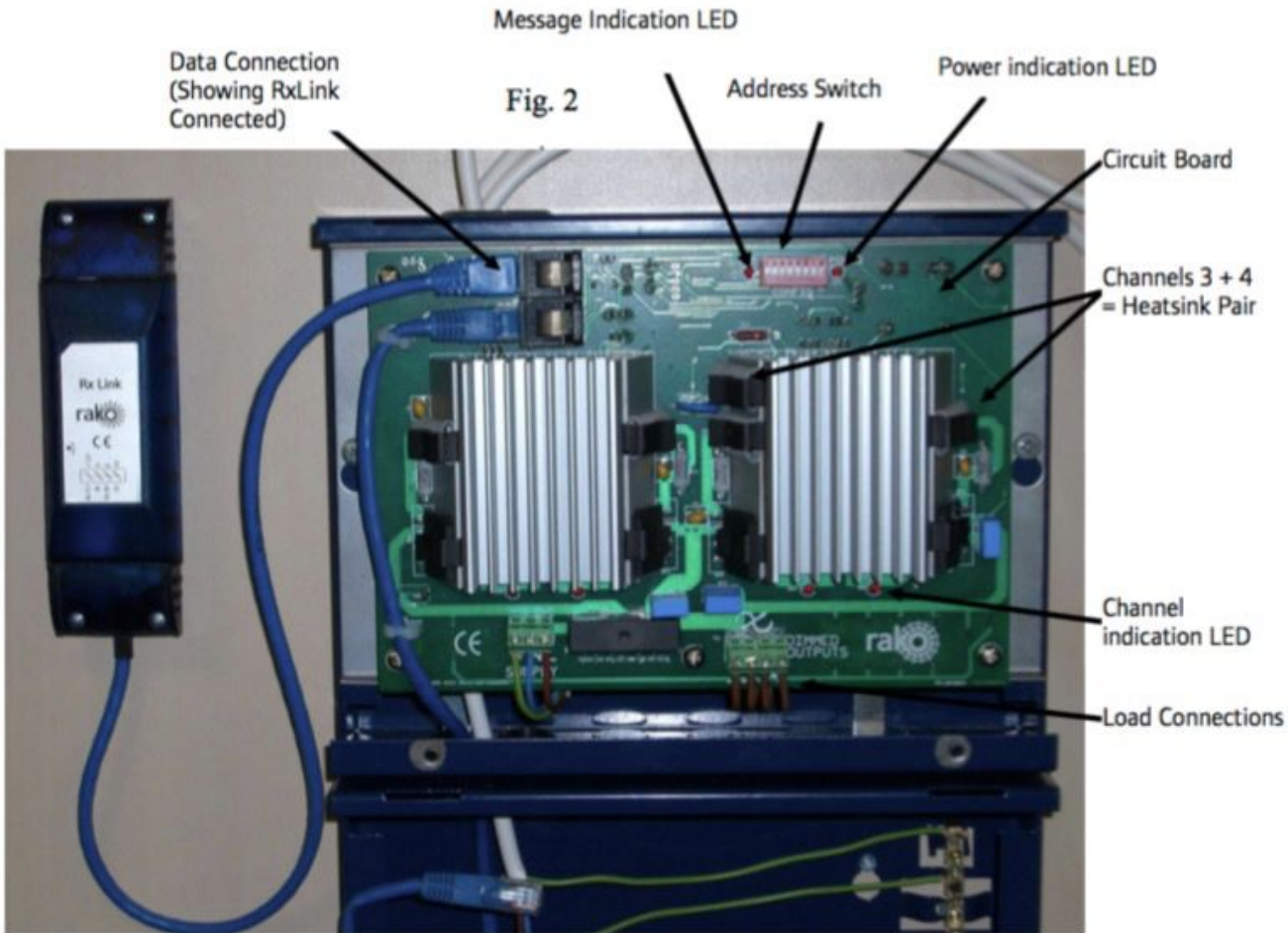
**Step 4** - Secure the circuit boards into position using the two fixing screws supplied and connect the Supply (LN&E) and the Live feeds to the loads. Do not connect more than 1500w to either channels 1 and 2 or 3 and 4. 1500w is the maximum load for each of the two heat sinks in the unit.

**Step 5** - On multiple assemblies of RAK4s link the circuit boards using the interconnecting leads supplied, plugging them into the IN/OUT RJ45 sockets, ensuring that the cable guides are used to avoid the data cable from touching the heat sinks. The system interface (RxLink for wireless, or RAKLink for wired networks) should then plug into one of the remaining IN/OUT sockets.

**Step 6** – Fit Lid

Fig. 1





## **Specifications**

<b>Dimensions</b>	253 x 192 x 102mm (w x h x d)
<b>Supply</b>	200-230VAC +/- 10% 50-60Hz 10A Type C MCB protected supply per RAK4
<b>Output</b>	10A total over the 4 channels (5A max per single channel load)
<b>Protection</b>	Auto resetting over current protection Auto thermal shutdown Voltage surge protection
<b>Minimum Load</b>	20W (per channel)
<b>Terminal sizes</b>	4mm <sup>2</sup>
<b>Standards</b>	EMC-EN 5001-1:1992 Immunity-EN 50082-1:1997 Data
<b>Communication</b>	Rakom coded FM radio
<b>Memory</b>	Flash memory (non volatile)
<b>In the Box</b>	Housing x 1 Circuit board and mounting plate x 1 Lid and retaining screws x 1 Interconnecting lead x 1