Rako RAK-4F 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 or 4 RAKs when used with the wireless RxLink interface or 8 RAKs when using the wired RAKLink interface. The dimming outputs can be used with 0-10v, DALI or DSI lamp ballasts.

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).

Before commencing installation of a Rako product 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.
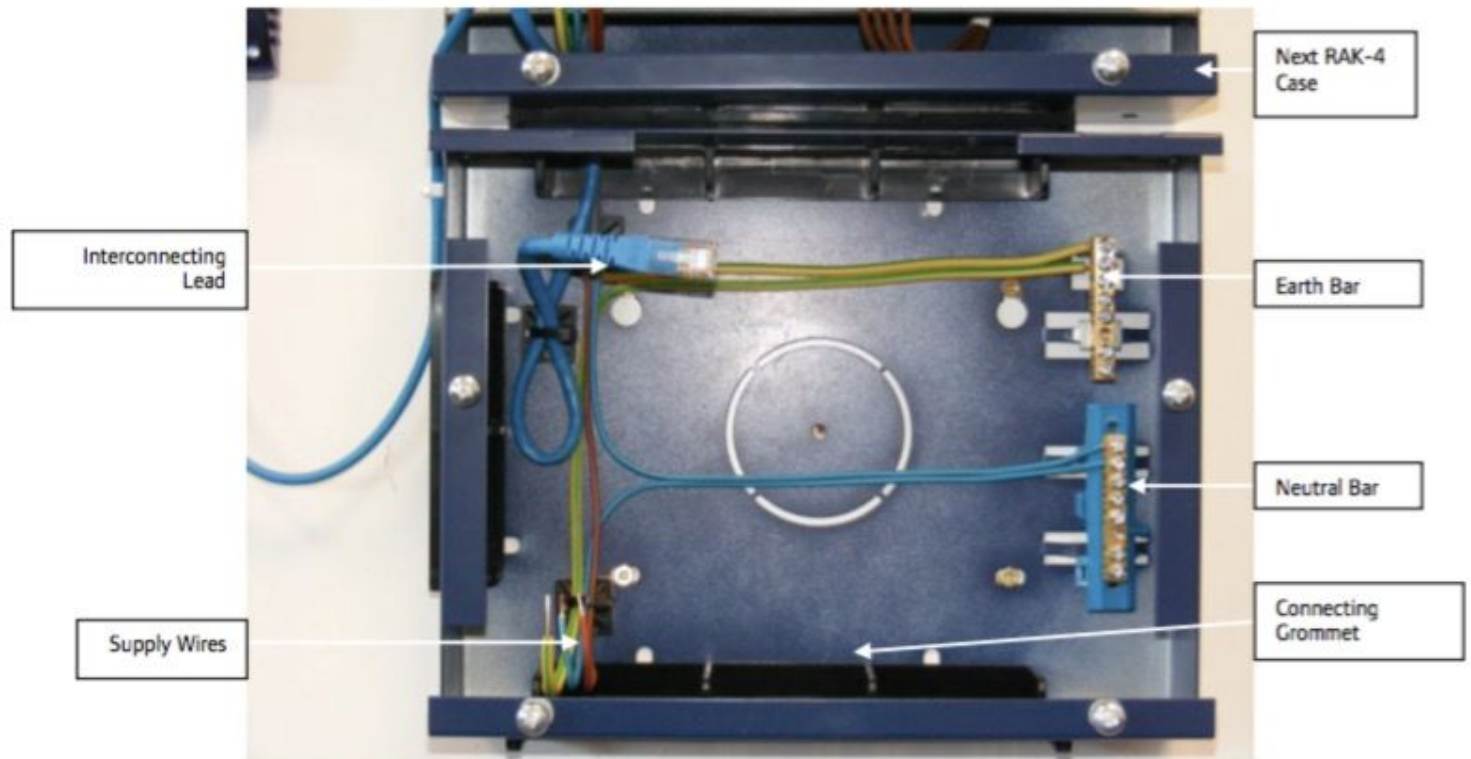
Step 3 - Bring a separate 10A MCB protected supply to each RAK4 case. Connect the Earth and Neutral supply to the appropriate connector block and leave the Live ready to connect to the circuit board. Bring a feed from both the Earth and Neutral bars ready to connect to the circuit board (see Fig.1) Also feed the load Lives and 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 (L,N&E) and the Live feeds to the loads.
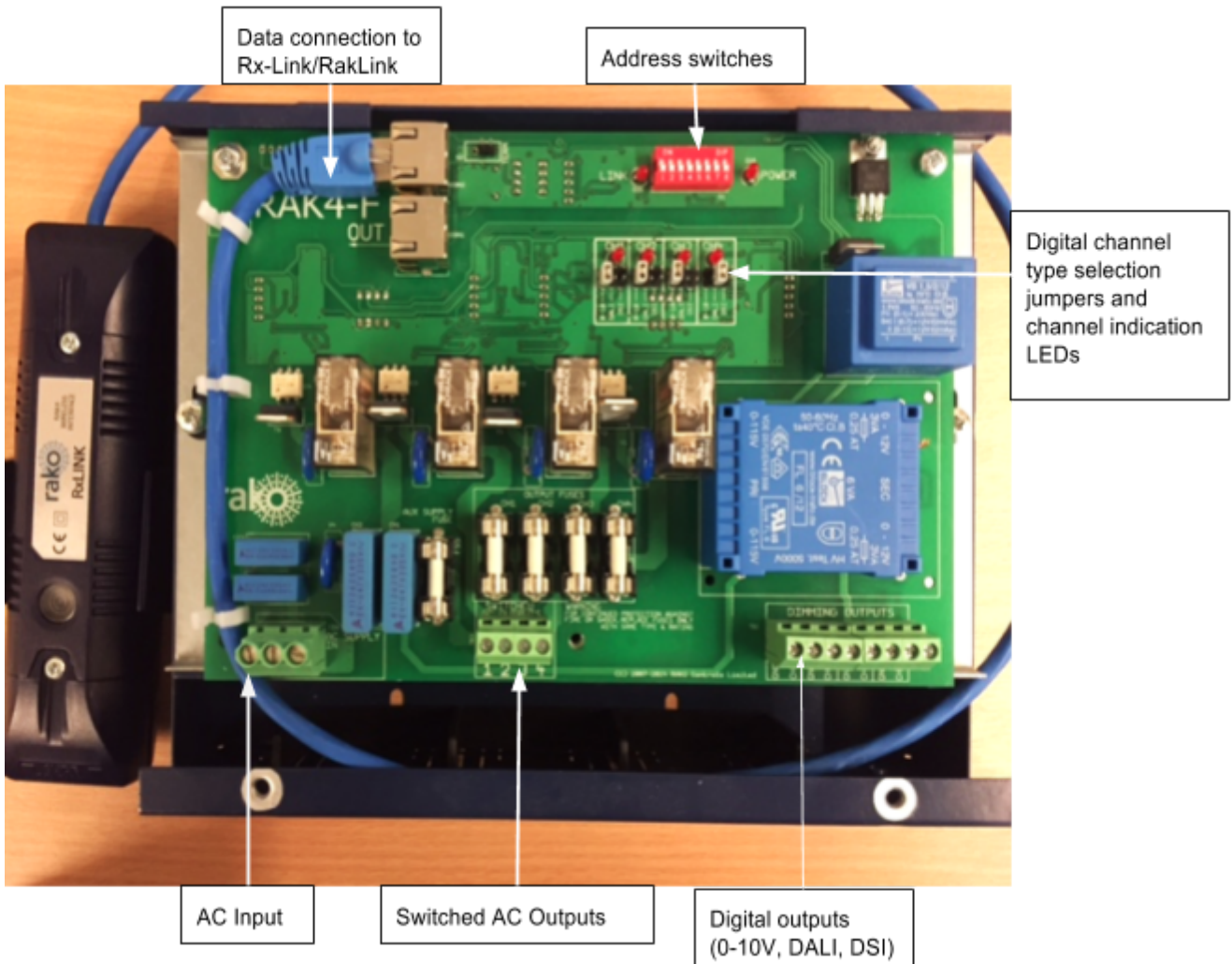
Step 5 - On multiple assemblies of RAK4s link the circuit boards using the interconnecting leads supplied, plugging them into the IN/OUT RJ45 sockets, ensuring that the cable guides are used to avoid the data cable from touching the heat sinks. The system interface (RxLink for wireless, or RAKLink for wired networks) should then plug into one of the remaining IN/OUT sockets.

Step 6 – Fit Lid

Fig. 1

Fig. 2

Data connection to Rx-Link/RakLink

Address switches

Digital channel type selection jumpers and channel indication LEDs

AC Input

Switched AC Outputs

Digital outputs (0-10V, DALI, DSI)

0-10V, DALI, DSI Operation

Each channel of RAK4-F can be configured for either 0-10V, DALI or DSI operation. Default factory setting is 0-10V. The digital output type is edited by either setting the jumpers on the circuit board or by using the software depending on the age of the product.
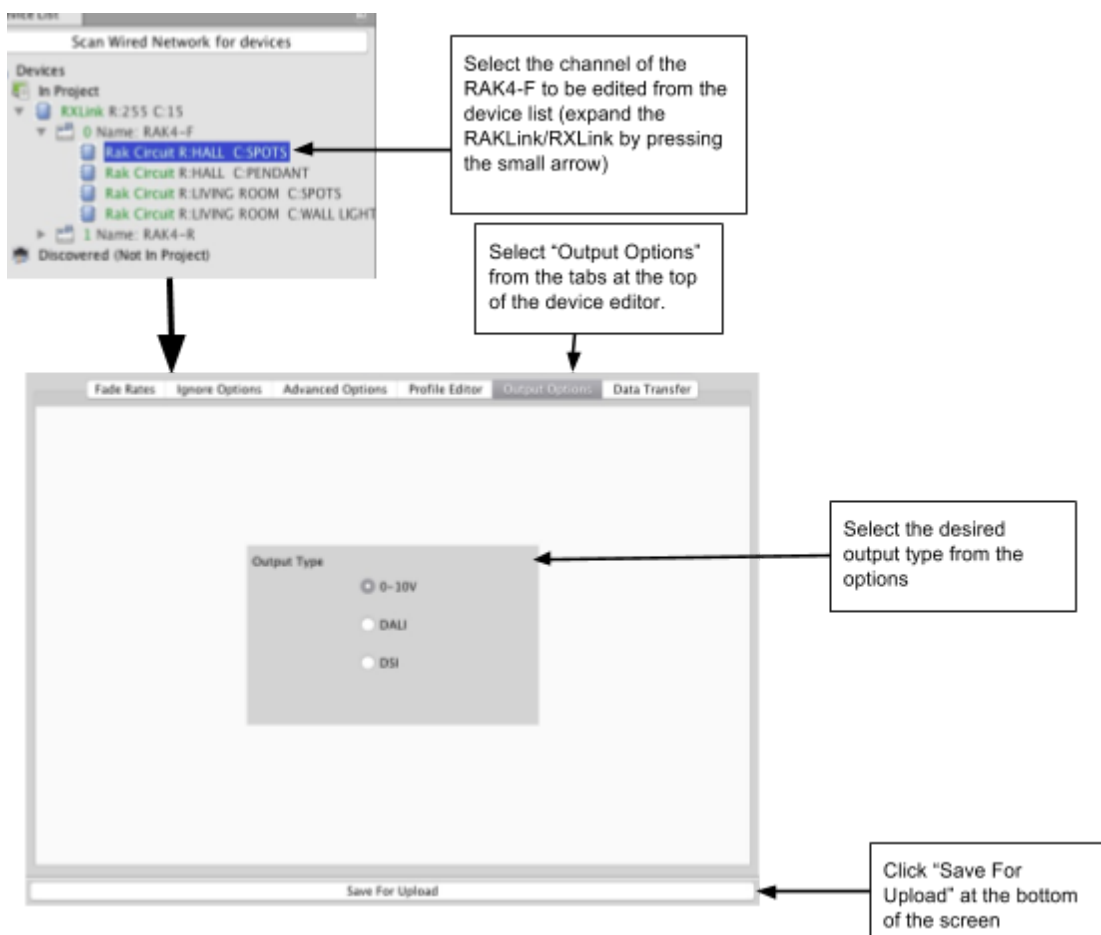
Issue C (jumpers fitted):

The output type for each of the channels is set by positioning the jumper below the channel LED as indicated by the legend on the circuit board. Ensure the power to the RAK4-F is turned off before removing the lid to adjust jumpers. If all jumpers are removed then the RAK4-F will default to 0-10V mode.

NB

Where jumpers are fitted they must be used, editing the output type via Rasoft pro will not work.

Issue A/B (no jumpers fitted):

The Digital output type is set using Rasoft Pro using the device editor tab entitled "Output options". First ensure that Rasoft Pro is connected to an appropriate communication device (Bridge, RAMPI or RAUSB) and the RAK circuits are mapped to the correct rooms and channels. For how to connect to a communication device and assign devices to channels. please see "Rasoft Pro Programming Guides".

NB

Using this method with an issue C board (those with jumpers fitted) will not work. The jumpers must be set correctly for the desired digital output type.

<u>Specifications</u>

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