

# RAK8-MB Instruction Manual



For programming information: [Wireless RAK Programming guide](#) or [Wired system Programming Guide](#)

For general system information: [Wireless RAK Application Sheet](#) or [Wired RAK Application Sheet](#)

## Overview:

The RAK8 Motherboard forms the base for up to 8 pluggable modules which can be added in any combination according to system requirements. Compatible pluggable modules to be used with the RAK8 motherboard are:

**WMT-400** - 400W Trailing edge dimmer

**WML-300** - 300W Leading edge dimmer

**WDA-600** - 600W digital dimmer for use with 1-10V, DSI and DLI broadcast

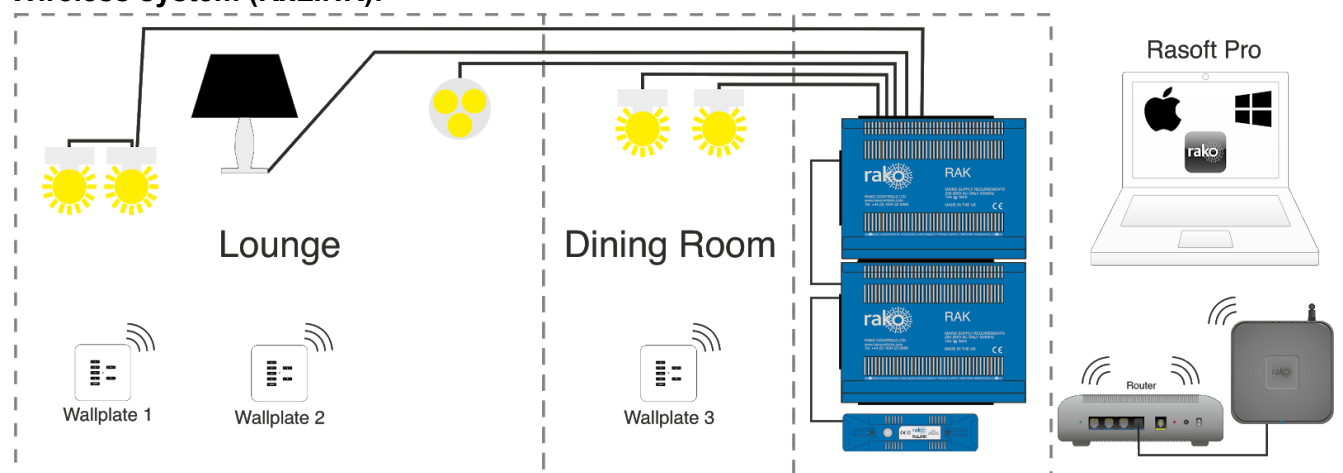
**WMS-600** - 600W Switching module

**WM-CUB** - Twin relay curtain and blind controller

RAK8s, combined with a Link device (RxLINK or RAK-LINK) can either be used as a single 8 channel unit or formed into a "stack". RAK8s can also be used in combined stacks with other RAK units (RAK4-T, RAK4-F, RAK4-R) on the same Link device.

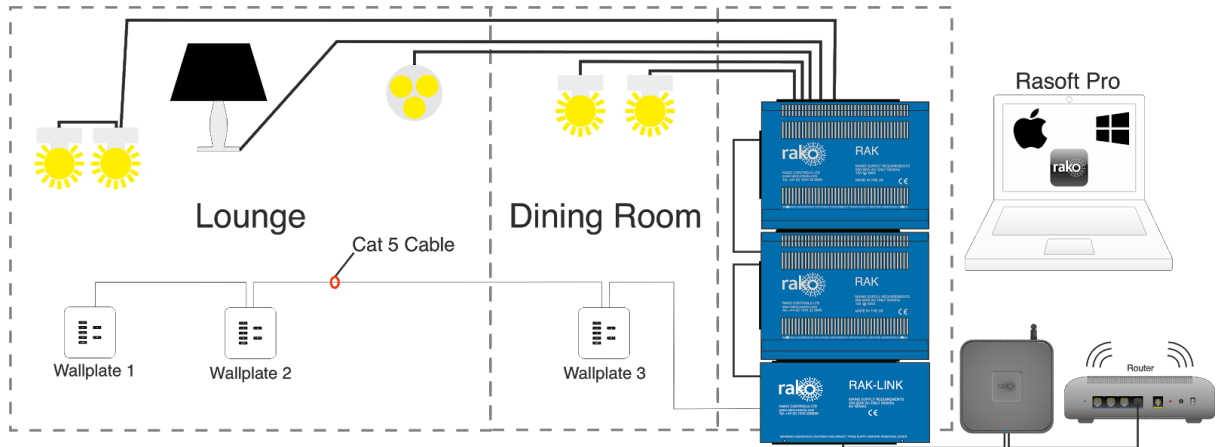
*Before commencing installation of a Rako product first read this instruction manual carefully. Rako Controls Ltd accepts no responsibility for any damage or injury caused by incorrect installation of a Rako product. Installation should only be carried out by a qualified electrician. Always install RAK units in a well ventilated room, with a minimum clearance of 50mm at the sides in the correct orientation i.e. vents top and bottom. Each RAK unit must be earthed.*

## Wireless system (RxLINK):



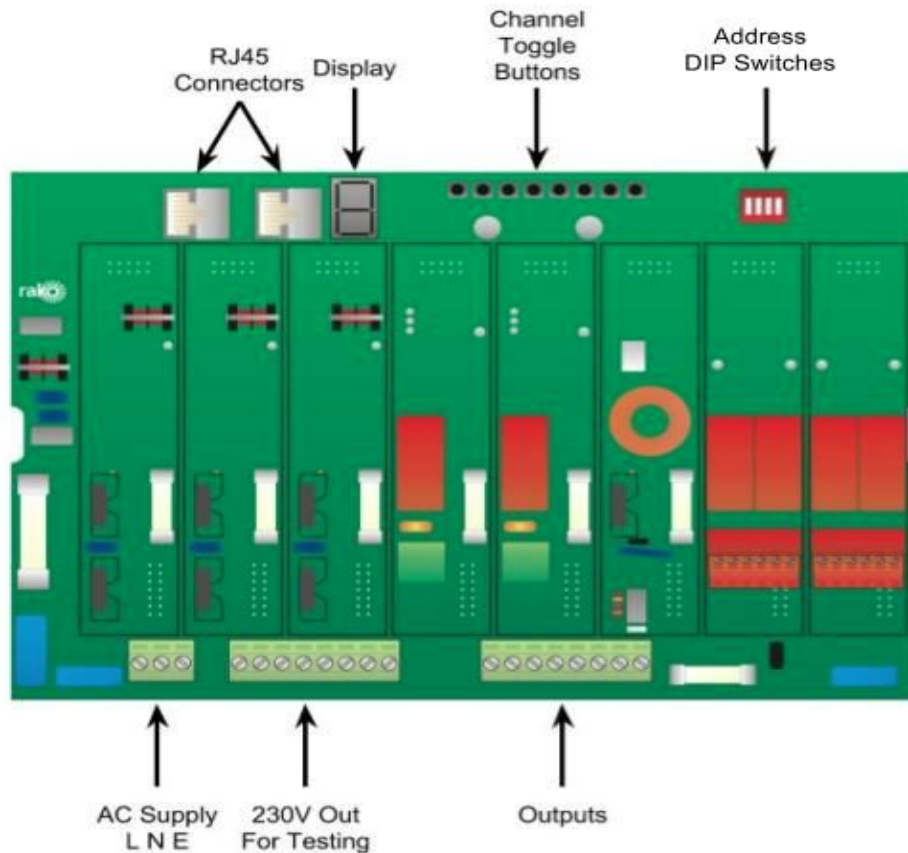
The RxLINK is used to integrate the RAK(s) into the wireless system and can support a total of 16 circuits. For example two RAK8s or one RAK8 and two RAK4s.

### Wired system (RAK-LINK):



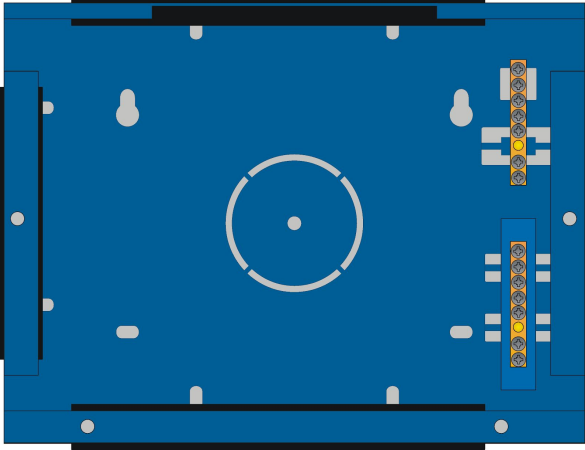
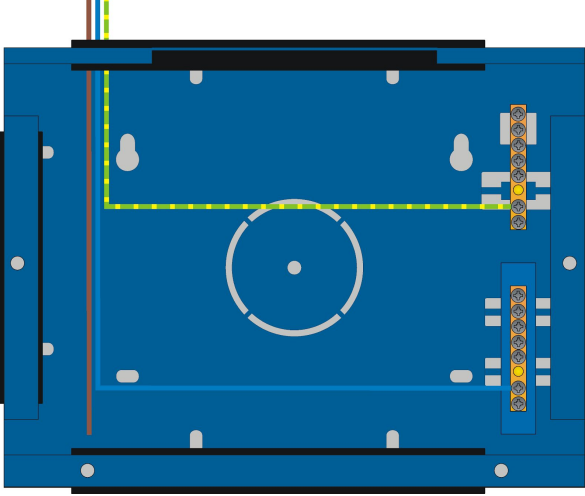
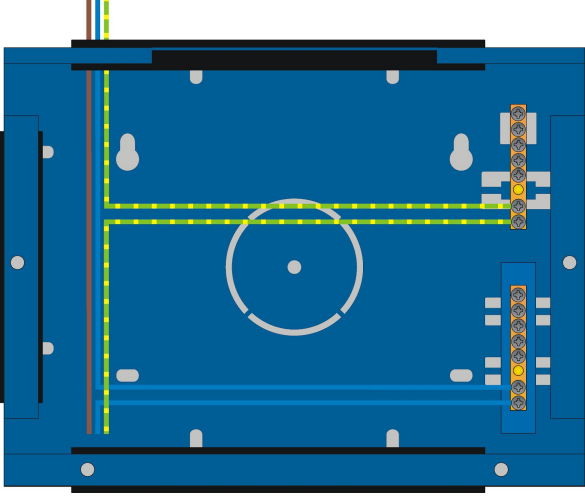
The RAK-LINK is used to integrate the RAK(s) into the Rako Wired Network and can support a total of 32 circuits. For example 4 RAK8s or 3 RAK8s and 2 RAK4s.

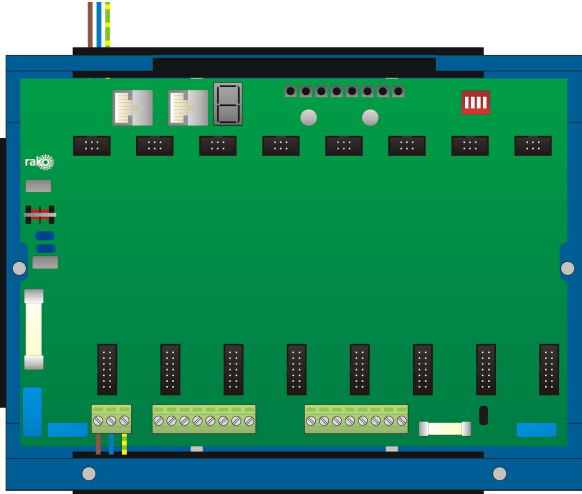
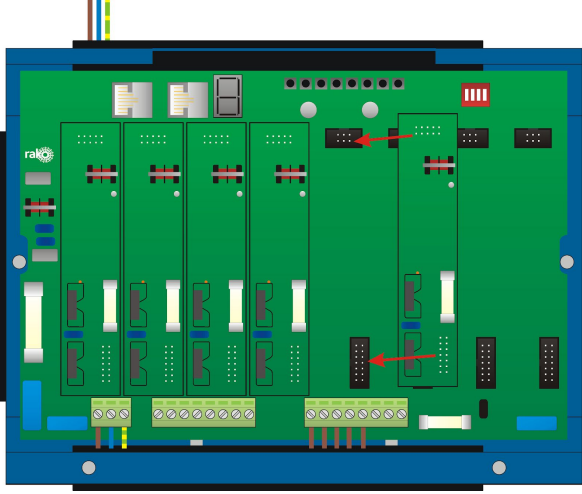
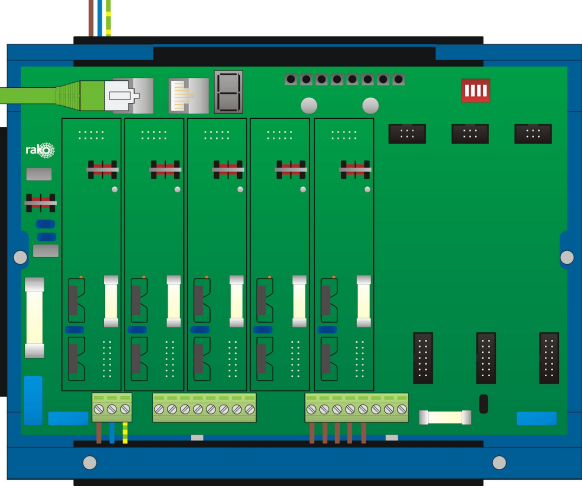
### [The circuit board:](#)



## Installation:

### **POWER SHOULD BE ISOLATED THROUGHOUT THE INSTALLATION PROCESS**

<b>Step 1</b>		<p>Secure metal box housing to wall or secure mounting position.</p> <p>The RAK system relies on being vertically mounted to allow the ventilation system to work properly.</p>
<b>Step 2</b>		<p>Bring a separate 10A protected supply to each RAK case.</p> <p>Connect the Neutral and Earth to the busbars as shown.</p> <p>Bring the live to the front of the metalwork ready for connection to the circuit board.</p>
<b>Step 3</b>		<p>Bring a single Neutral and Earth from the busbars to the front of the metalwork.</p> <p>Prepare screws on either side of metalwork ready to hold the circuit board. They should be present and screwed loosely into the case.</p>

<p><b>Step 4</b></p>		<p>Place the circuit board on the two screws on either side of the metalwork.</p> <p>Do not screw down at this stage as the busbars need to be accessible for Neutral/Earth connections of lighting circuits.</p> <p>Connect Live, Neutral, Earth for board supply as indicated.</p>
<p><b>Step 5</b></p>		<p>Insert the daughterboards into the slots on the motherboard.</p> <p>Connect Neutral and Earth to appropriate busbars in the back of the casing</p> <p>Make Live load connections to the right hand 8 way terminal block as shown.</p> <p><b>NB</b> In this example 5 slots of the RAK6-MB are used.</p>
<p><b>Step 6</b></p>		<p>Insert the RJ45 cable from the RAK-LINK/RxLINK into the port on the RAK and from there another RJ45 cable to each RAK in the "stack".</p> <p>Screw down the circuit board to secure it to the case and fit lid to complete installation</p> <p><b>NB</b> The WDA-600 and WM-CUB will have connections on the circuit boards themselves which also need to be connected.</p>

Rako thanks you for having purchased a Rako product and hopes that you are pleased with your system. Should for any reason you need to contact us please contact us via our website [www.rakocontrols.com](http://www.rakocontrols.com) or by phoning our customer help line on 01634 226666.



## [Appendix: WM-CUB wiring diagrams](#)

### Mains switching

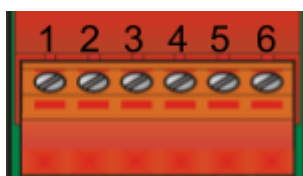
The WM-CUB is most commonly used with “mains switching blinds”. The six way terminal block is fed with permanent mains and has two switched mains outputs. A three core and earth cable should be run from the WM-CUB to the blind.

### 24V Polarity switching

The WM-CUB can also be used to control 24V polarity switching blinds. In this case a separate 24V power supply is required and a two core cable should be run from the WM-CUB to the blind.

### Contact Closure

The WM-CUB can be used to provide a control signal to the blinds. In this case a 3 core cable is run from the WM-CUB to the blind control box.



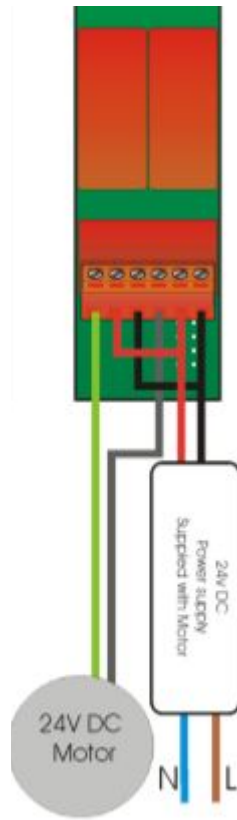
### Mains Blinds wiring:

Terminal	Mains
1	Permanent Mains
2	Relay A Output (Open)
3	Linked to 4
4	Linked to 3
5	Relay B Output (Close)
6	Not used



**24V Blind wiring:**

Terminal	24V
1	Relay A Output (Open)
2	+24V from PSU
3	0V from PSU
4	Relay B Output (Close)
5	+24V from PSU
6	0V from PSU



**Contact closure blind wiring diagram:**

Terminal	Contact Closure
1	Common
2	Relay A Output (Open)
3	Not used
4	Common
5	Relay B Output (Close)
6	Not used

