RAK4-R 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

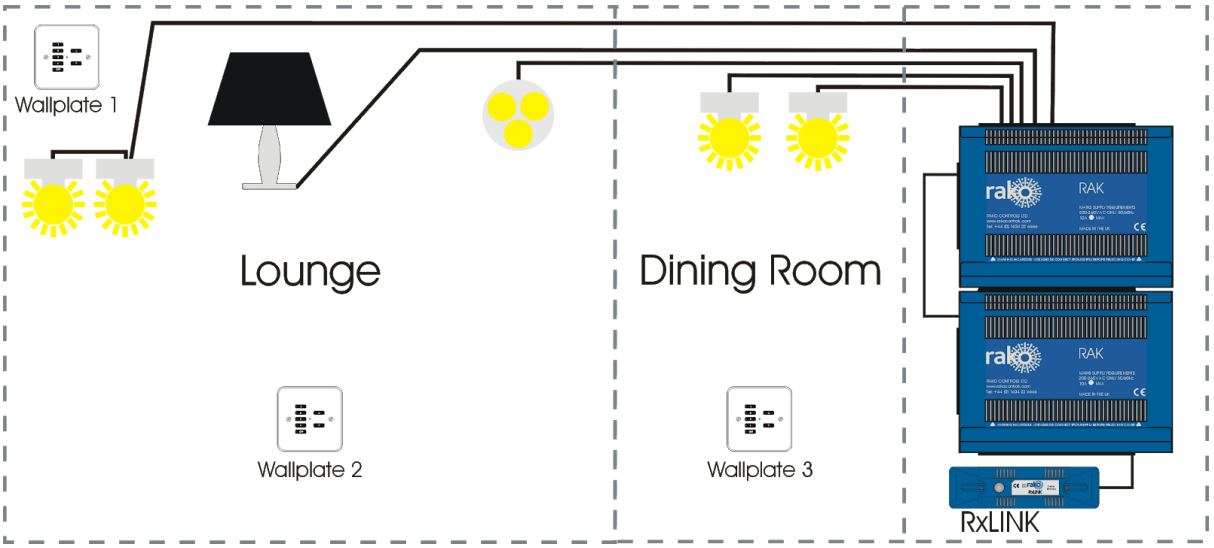
The Rako RAK4-R is a four channel controller which can be used to operate most types of Curtain, Blinds and Screen motors.

Each of the four outputs comprise two uncommitted volt-free relays. The relays can be wired or switched to suit the specific motor connected to them. The RAK4-R provides aux Live outputs that can be used to drive AC motors.

RAK4s, combined with a Link device (Rx-LINK or RAK-LINK) can either be used as a single 4 channel unit or formed into a “stack”. RAK4s can be also be used in combined stacks with RAK8-MB units on the same Link device.

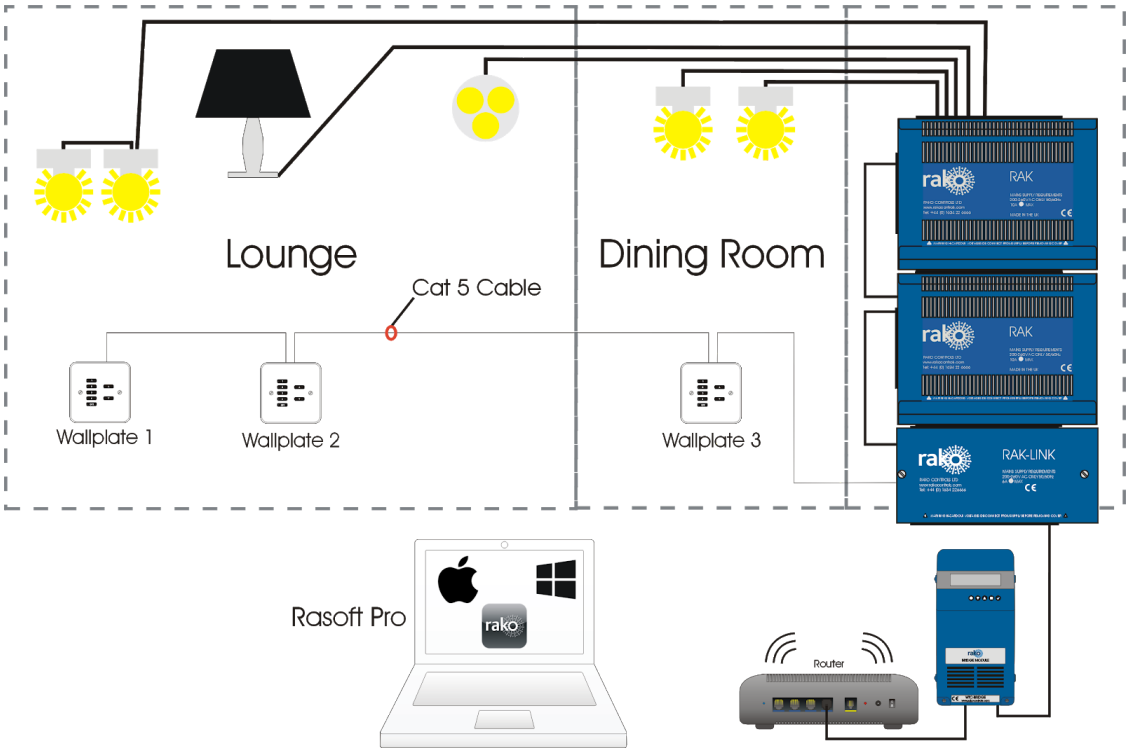
Before commencing installation of a Rako product first read this instruction manual carefully. Rako Controls Ltd. accepts no responsibility for any damage or injury caused by incorrect installation of a Rako product. Installation should only be carried out by a qualified electrician. Always install RAK 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):



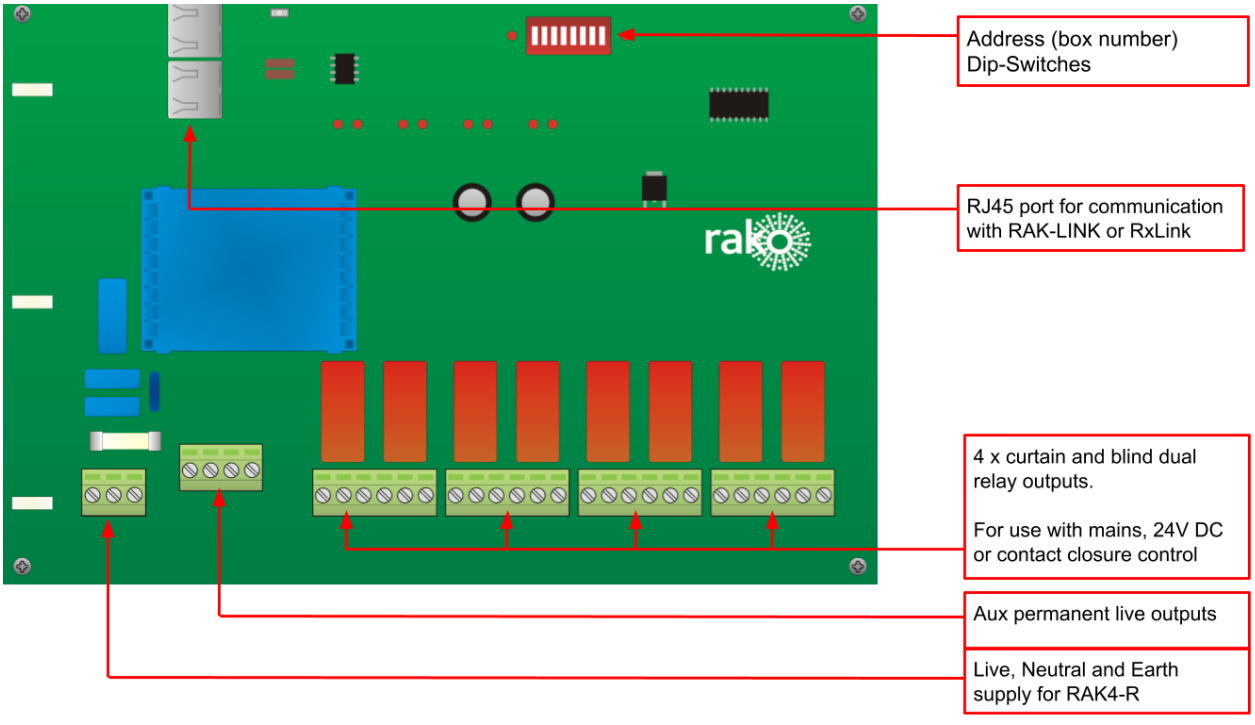
The RxLINK is used to integrate the RAK(s) into the wireless system and can support a total of 16 circuits. For example two RAK8s or one RAK8 and two RAK4s.

Wired system (RAK-LINK):



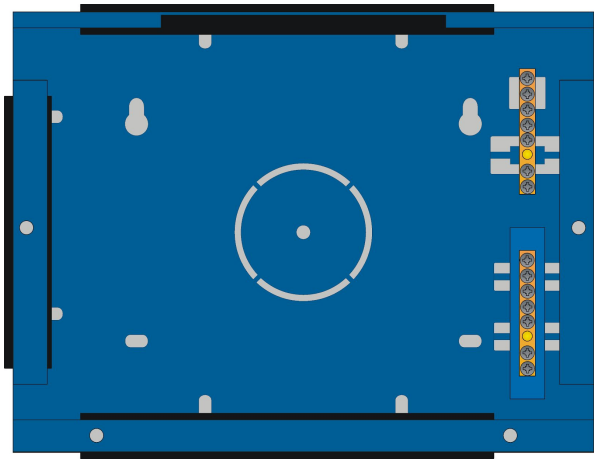
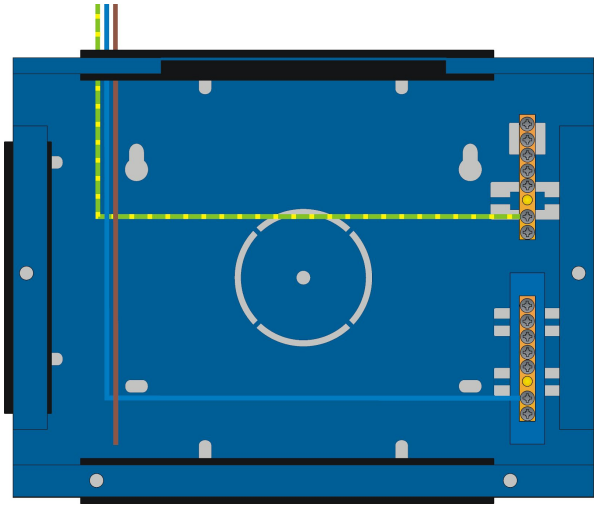
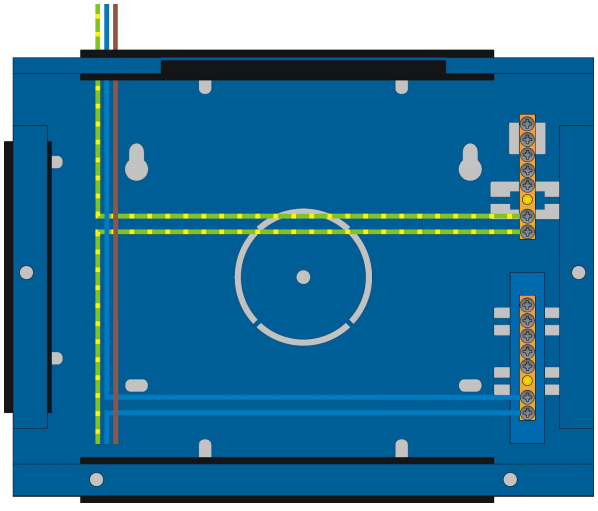
The RAK-LINK is used to integrate the RAK(s) into the Rako Wired Network and can support a total of 32 circuits. For example 4 RAK8s or 3 RAK8s and 2 RAK4s.

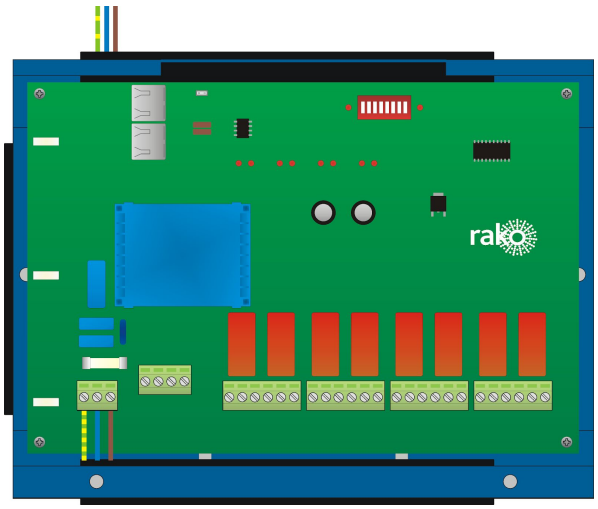
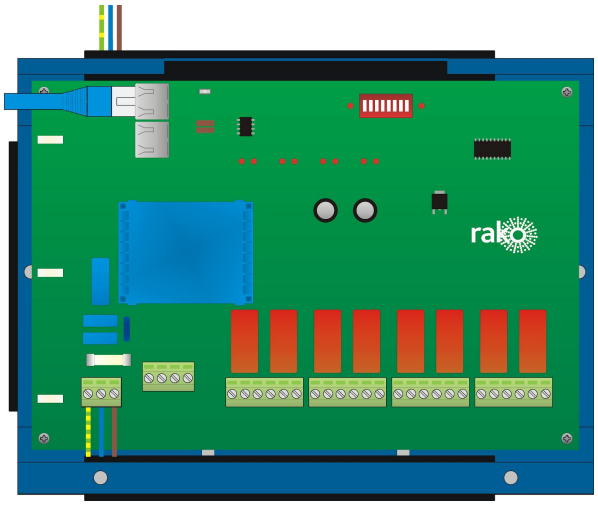
Circuit Board



Installation

POWER SHOULD BE ISOLATED THROUGHOUT THE INSTALLATION PROCESS

Step 1		Secure metal box housing to wall or secure mounting position. The RAK4 system relies on being vertically mounted to allow the ventilation system to work properly.
Step 2		Bring a separate 10A MCB protected supply to each RAK case. Connect the Neutral and Earth to the buzz bars as shown. Bring the live to the front of the metalwork ready for connection to the circuit board.
Step 3		Bring a single Neutral and Earth from the buzz bars to the front of the metalwork. Prepare screws of either side of metalwork ready to hold the circuit board. They should be present and screwed loosely in to the case.

Step 4		Insert the circuit board on to the two screw on either side of the metalwork. Do not screw down at this stage as the buzz bars need to be accessible for Neutral/Earth connections of curtain/blind circuits. Connect Live, Neutral, Earth for board supply as indicated.
Step 5		Insert the RJ45 cable from the RAK-LINK/RxLink into the port on the RAK4-F. See “Wiring for different motor types” for load connections

Wiring for different motor types:

Mains switching

The RAK4-R is most commonly used with “mains switching blinds”. The six way terminal block is fed with permanent mains and has two switched outputs. A three core and earth cable should be run from the RAK4-R to the blind.

24V Polarity switching

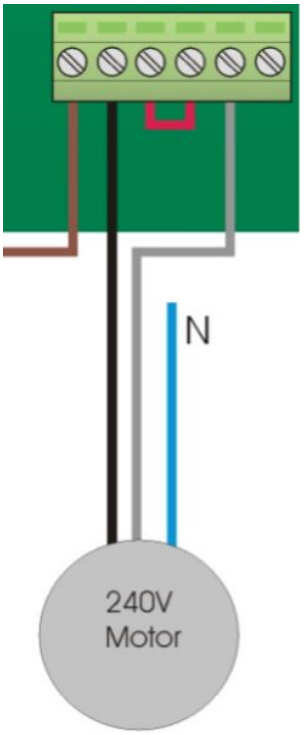
The RAK4-R can also be used to control 24V polarity switching blinds. In this case a separate 24V power supply is required and a two core cable should be run from the RAK4-R to the blind.

Contact Closure

The RAK4-R can be used to provide a control signal to the blinds. In this case a 3 core cable is run from the RAK4-R to the blind control box.

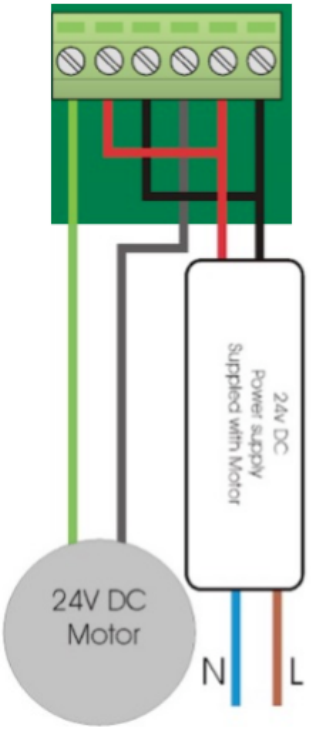
Mains Blinds wiring:

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



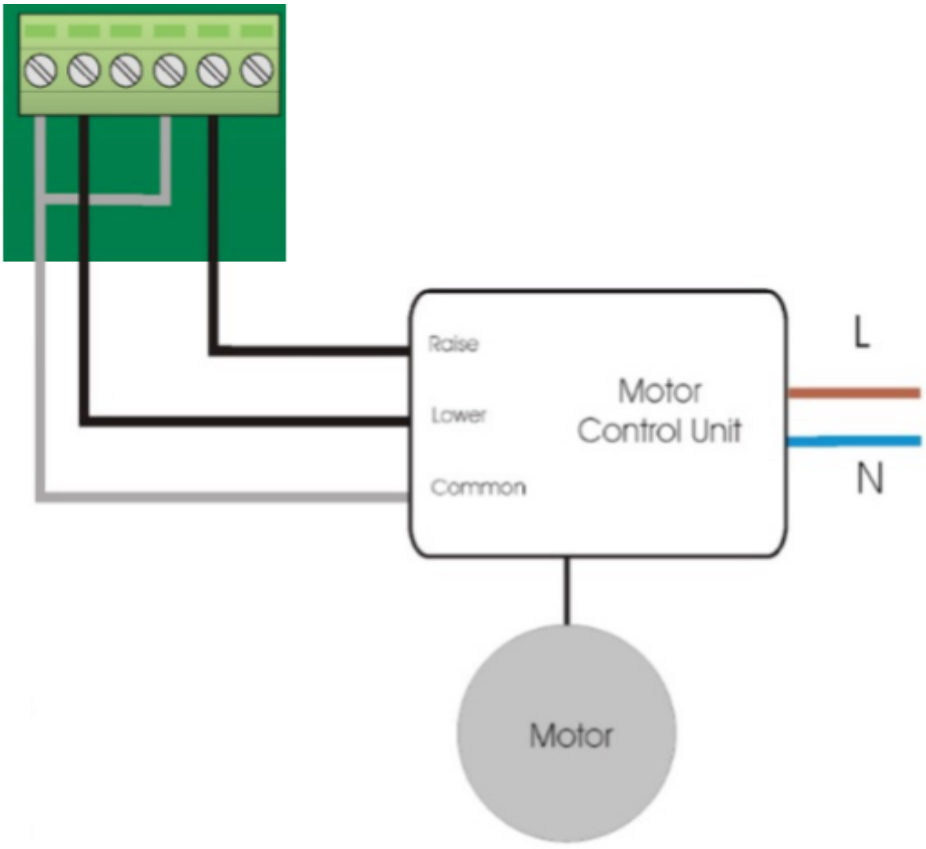
24V Blind wiring:

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



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 or by phoning our customer help line on 01634 226666.