

Batteryless Remote Control

- Upto 500 Metres Range
- Energy Harvesting Transmitter
- Requires No Battery!
- 868/915MHz FM Technology
- Output Channels each 1000W
- High Security RF Protocol
- Receiver Supply 110-230Vac
- Waterproof Receiver (IP65)
- Outputs Momentary
- Systems supplied 'ready to Go'
- CE Compliant / FCC Pending



Applications

- General Purpose Remote Switching
- Industrial , conveyors, machinery, pumps etc
- Lighting Control

Description

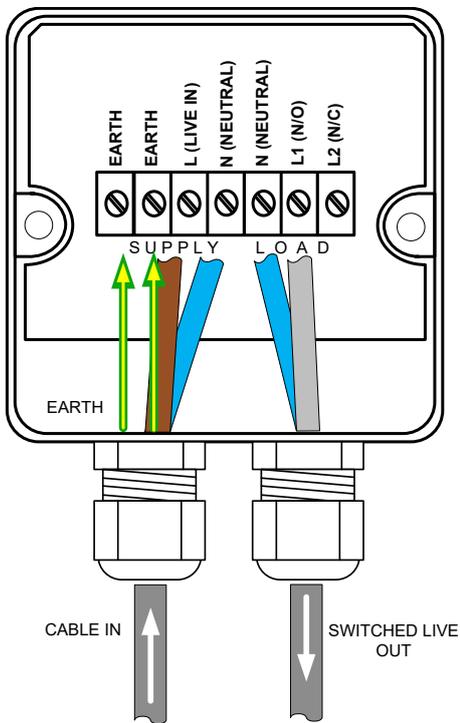
A versatile Remote Control System for many different applications. The outputs are activated by the button press on the transmitter.

Within the Transmitter is an Energy Harvesting unit which captures the energy when the switch is pressed to generate the power to transmit a +13dBm RF signal which can achieve upto 500metres range.

Housed in rugged enclosures, This system is ideally suited to any Remote switch requirement. Installation is by screw terminals and is supplied ready to go with no configuration required .

Cable Connections

KAPBOX is very easy to connect, simply wire as follows:



Receiver

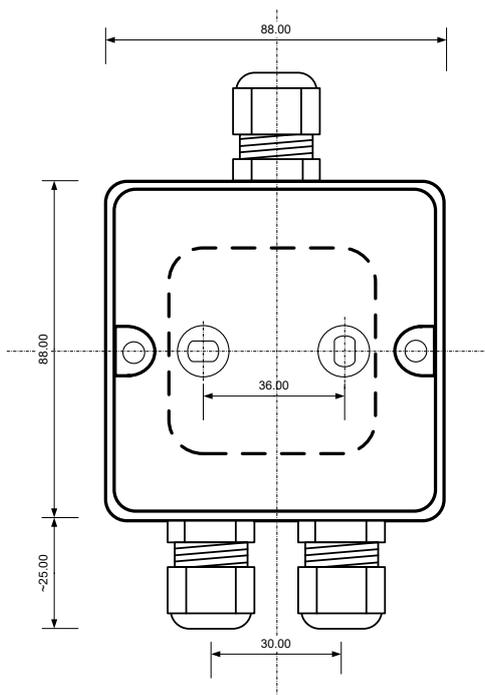
KAPBOX - Receiver:

1. Connect the Supply:
LIVE, NEUTRAL and EARTH.
Connect the Live to the screw terminal marked: LIVE then connect the NEUTRAL and EARTH respectively.
2. Connect the LOAD to the receiver and wire in as required.

Important Notes:

- All mains powered units must be earthed
- Hardwired units must be connected via an isolating switch

Dimensions and Wall mounting information:



KAPBOX is a professional use product and should only be installed by a competent person.

Fixing Instructions:

1. Fix the rear of the KAPBOX enclosure to the wall using the template above.
2. Ensure that all fixing screws are screwed flush to the enclosure.
3. Ensure that the screw covers are put in place. These ensure water proofing and insulate the PCB from the wall fixing screws. Screw Covers are found inside the rear of the enclosure.
4. Once the enclosure is fixed to the wall, screw the on front plate with the PCB in place.

Systems (Supplied ready to operate)



Part Number	Description	Frequency	Range** (Metres)
KAPBOX-8S1	System 1 channel	868MHz	500
KAPBOX-8S2	System 2 channel	868MHz	500
KAPBOX-9S1	System 1 channel	915MHz	500
KAPBOX-9S2	System 2 channel	915MHz	500

** Range stated is optimum, direct line of sight. In worst conditions this can be reduced by over 50%

Individual Parts



Part Number	Description	Frequency
KAPBOX-8t1	Transmitter 1 channel	868MHz
KAPBOX-8t2	Transmitter 2 channel	868MHz
KAPBOX-8R1	110-230Vac Receiver Unit	868MHz
KAPBOX-9t1	Transmitter 1 channel	915MHz
KAPBOX-9t2	Transmitter 2 channel	915MHz
KAPBOX-9R1	110-230Vac Receiver Unit	915MHz

Operation

1 Switch Version

Each Press of the Transmitter Causes the Receiver to Toggle the Output from ON to OFF and so on

2 Switch Version

Pressing the Transmitter GREEN Switch Causes the Receiver Output ON

Pressing the Transmitter RED Switch Causes the Receiver Output OFF

Custom Versions

We can offer custom version product Please contact Sales for further info.

Pairing a Receiver

Systems are supplied ready to operate, if multiple transmitters are to be configured to operate with a single receiver please follow this pairing procedure.

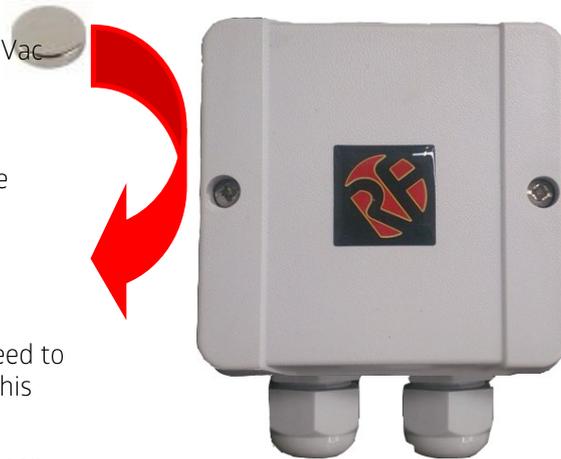
To pair the MAINSLINK-RX it must have a 230Vac supply connected.

1. Briefly place a magnet on the receiver by the MAINSLINK-RX as shown .

This will put the receiver into learn mode.

When the receiver is in learn mode you will need to pair the transmitter within 10 seconds. To do this you simply operate the transmitter twice.

Allow 15 seconds for the receiver to return to normal operation.



Erasing a Receiver

To erase all transmitters from the MAINSLINK-RX hold a magnet beside the learn switch for 10 seconds as shown

NOTE: You cannot erase individual Transmitters.



Advanced Operation—Configuring a Receiver

WARNING The MAINSLINK is designed to operate between 110-230V in a fixed installation. Before removing the cover on either Transmitter or Receiver ensure that the mains input supply is isolated. Maintenance to the product that involves removal of the cover should only be carried out by a competent person or qualified electrician.

Configuring the Receiver Output:

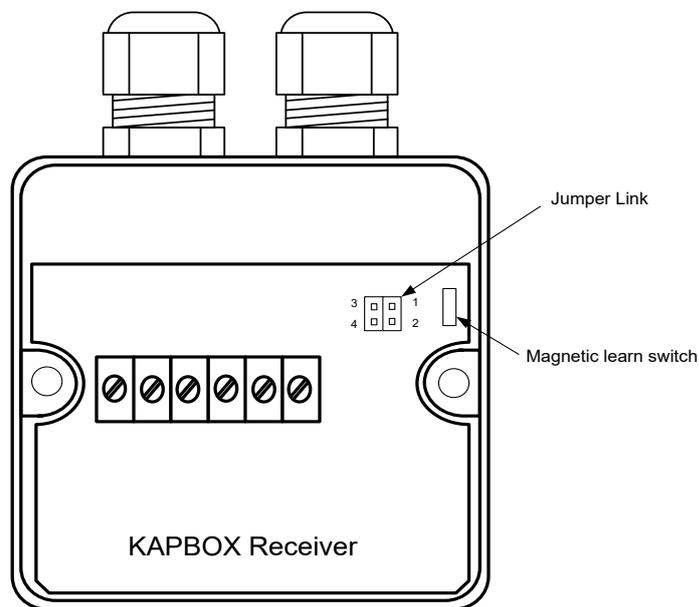
When supplied as a system the Receiver is pre-configured at the factory.

When supplied as a single receiver the internal Jumper links may need to be set.

To Fit the Jumper Link place the header cap over pins 1-2 so that they are shorted together

Jumper link Fitted = Output action is Latching - this is for use with a single button Transmitter

Jumper link Open = Output action is Momentary - this is for use with a Two button Transmitter



Technical Specifications

Transmitter

Enclosure Rating: Standard IP40
 Dimensions: 1 Sw version w=70, h=70mm d=50, 65mm incl Switch
 2 Sw version w=70, h=105mm d=50, 65mm incl Switch

Electrical Characteristics	Min	Typical	Max	Units
Frequency:		869.500 915.00		MHz
RF Output Power (ERP) @ 433MHz	-		+13	dBm

Receiver

Dimensions: 88 x 88 x 54mm
 Enclosure Rating: Standard IP65
Storage Temperature: -10 to +70° Celsius. **Operating Temperature:** 0 to +50° Celsius.

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage RX:	100	230	250	Vac
Quiescent Current: RX: (Relay not operating - negligible @230V <0.1uA)		0.1		mA
Maximum switching load (RX)		1000		W
Time delay from Tx on switch to Rx Relay operation:		50		mS
Time delay from Tx sw relax to Rx Relay release:		50		mS

RF Solutions Ltd. Recycling Notice

Meets the following EC Directives:

DO NOT : Discard with normal waste, please recycle.

ROHS Directive 2002/95/EC : Specifies certain limits for hazardous substances.

WEEE Directive 2002/96/EC waste electrical & electronic equipment. This product must be disposed of through a licensed WEEE collection point.

RF Solutions Ltd., fulfills its WEEE obligations by membership of an approved compliance scheme.



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