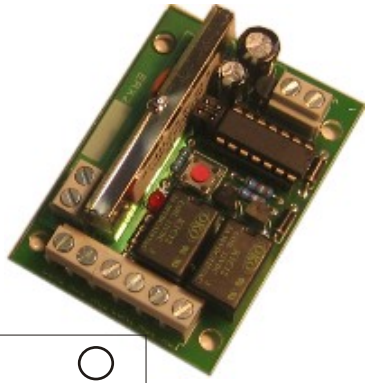
2 CHANNEL CODED RADIO RECEIVER

Part number ERX2-434

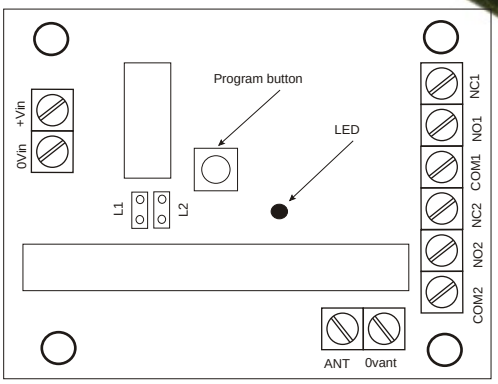


Description

A tiny PCB with a high quality programmable 2channel licence free radio receiver. Comprising a high sensitivity FM receiver, 2 relay outputs with normally open and normally closed contacts which can be programmed for momentary or latched operation and on board requlator on a PCB measuring only 62x45x20 LxWxH. Compatible with ETRX6-434 and with a nominal range of over 700 Metres.

Specification

Parameter	
Operating voltage	12V DC
Current drain	
Standby	11mA
1 relay on	40mA
2 relays on	65mA
Relay contacts	3A@30VDC/125VAC
RF frequency	434.075 Mhz
Operating temperature	-25 to +55C
Code length	24 bit +control bits
Code frequency	8KBPs



Connections

+Vin	Positive supply (+12V DC)
0Vin	Supply 0V connection
NC1	Normally closed contacts relay 1
NO1	Normally open contacts relay 1
COM1	Common for relay 1 output
NC2	Normally closed contacts relay 2
NO2	Normally open contacts relay 2
COM2	Common for relay 2 output
ANT	RF antenna out
0Vant	Antenna ground connection

Operating instructions

Set up:
If latching operation is required, remove the link for the channel on which latching operation is required. Link1 refers th channel 1 and Link2 refers to channel 2.
The outputs from the PCB are volt-free relay outputs with Normally closed, Normally open and Common connections.

Programming procedure:
1.Connect power to the PCB
2.The LED will flash once to indicate that the PCB is powered and self test is ok.
3.Press the program button once to select programming of relay 1 and the LED will come on and stay on.
4.Trigger the transmitter which is required for this channel.
5.The LED will flash 3 times and then stay on to indicate that programming is successful.
6.Press the button again to select programming of relay 2, the LED flashes and then stays on.
7.Trigger the transmitter required for this channel.
8.The LED flashes 3 times and then stays on to indicate programming is successful.
9.Press the program button again.
10.The LED flashes quickly for 5 seconds and then the module goes into normal operation.
*You may erase all stored codes by continuously holding the program button during step 10 (LED flashing quickly)
*Up to 5 codes may be stored for each of the 2 channels. When the memory for a channel is full, step 5 and step 10 will only flash once indicating no more space available in memory.
Once programmed, the channel codes are stored permanently in memory even after removal of power.
Programmed data can be overwritten by following steps 1 to 10.

Momentary Operation:
When a channel is triggered, the relay contacts will change state for 1 second, if the transmitter continues to transmit, the relay will stay closed until the transmitter stops operating.

Latching Operation:
Link1 refers to relay 1 and Link2 refers to relay 2. If the link is removed, then the channel will operate in latching mode and the relay will change state each time the transmitter is operated.

An antenna must be connected to the ANT output to ensure maximum RF emitted power and range. For best results, use a piece of wire of length 155 mm. If greater range is required, connect the 155mm antenna perpendicular from the centre of a groundplane which is connected to the 0vant input with. Never connect the ANT input to 0V or 0vant, as this could cause permanent damage to the radio module. If the antenna is to be connected at a distance from the PCB, then connect using co-axial cable of 50 ohms characteristic impedance.

Programming example: (Programming O/P 1 momentary, O/P2 latched)

1.Remove Link2,ensure Link 1 is fitted.
2 Apply power to module. (LED flashes once to indicate module powered)
3.Press program button.
4. LED illuminates permanently.
5.Trigger the transmitter which is required for this channel. (LED flashes 3 times and stays on)
6. Press program button. (LED flashes OFF then stays ON)
7.Trigger the transmitter required for this channel.
8.LED flashes 3 times and then stays on.
9.Press program button. (LED flashes quickly for 5 seconds)
10.Module is now programmed and in operating mode.