



EMOD 204

- Remote Control System 1 or 4 channels
- Waterproof Receiver IP68
- Relay outputs 30A@230Vac
- 433MHz FM operation for reliable long range performance
- Spade connections to Relay outputs
- Easy Learn Transmitters
- Applications
- Garden Light
- Floodlights
- Access Control
- Outside Remote Control

The EMOD range are ready to operate general purpose remote control systems using a highly secure transmission protocol for reliable operation.

Each system comprises of a matched transmitter and receiver. The receiver is a completely waterproof resin module. Connections are easy with spade terminals for the relay contacts and wire leads for power.

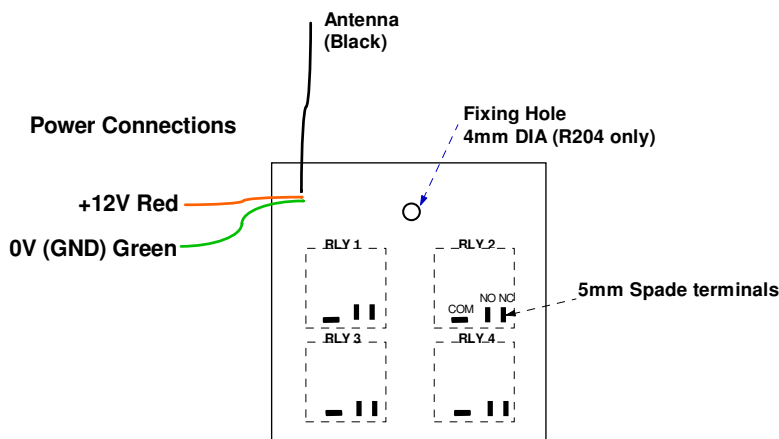
Each system is supplied ready to operate. Additional transmitters may be added using the receivers 'easy Learn' procedure.

Part Numbering

Part No	Description
EMOD204S4-433F	Remote Control System, 4 Channels, 433MHz, 100m Range*
EMOD120S3-433F	Pocket Keyfob Remote Control System, 3 Channels, 433MHz, 100m Range*

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

Receiver Unit



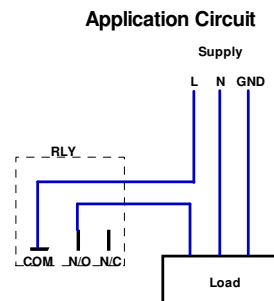
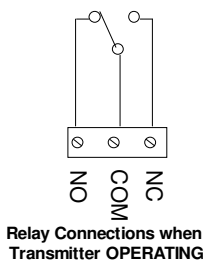
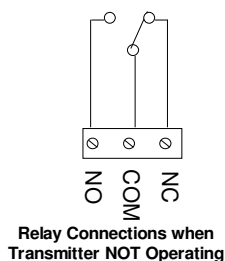
Connections

The receiver can be powered from either 12Vdc as follows:

- Red Wire: Connect to 12Vdc for use with 12Vdc Supply only
- Green Wire: Connect to 0V (GND)
- Black Wire: Antenna. Do not cut this!. If possible position so that it protrudes in a vertical direction.

Data Outputs

Each output relay provides an isolated switch. Connections are Common (COM), Normally Open (NO) and Normally Closed (NC).



Please Note: The relay contacts are for functional use only and must not be used for isolation purposes.

Technical Specifications

Dimensions

204 Transmitter:	96 x 47 x 23mm	120 Transmitter:	36 x 66 x 17 mm
EMOD Receiver:	82 x 62 x 34 mm		

Storage Temperature: -10 to +70° Celsius. Operating Temperature: 0 to +55° Celsius.

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage: 12V Supply	11	12	16	V
Supply Current : Quiescent		9		mA
All Relays Operating			300	mA
Time from Tx Switch depressed to 210Rx output			100	mSecs
Time from Tx Switch release to Decoder output			200	mSecs



Learning a new Transmitter Encoder

All systems are supplied pre-learned, ready to operate.

With this system each of a transmitters' 'buttons' may be paired to one or many individual output relays on the receiver, as below. Up to 7 transmitters may be learnt to each receiver relay output.

Please Note: During Learn and Erase the relays operate at high speed. They should be isolated from sensitive equipment during this process.

1. Decide which transmitter 'button' is to be paired with which receiver relay output.
2. Apply power the receiver and wait 10secs for the unit to enter 'normal operation' mode.
3. Switch the receiver unit OFF and then ON again in ~1sec intervals **four** times finally leaving the unit powered.
4. After 5 seconds 3 'clicks' are heard. The unit is now in 'learn' Mode
5. The receiver will now cycle through all the relays in turn.
For relay #1 one click will be heard
For relay #2 two clicks will be heard
For relay #3 three clicks will be heard
For relay #4 four clicks will be heard
6. When you hear the number of "clicks" corresponding to the relay you wish to learn press the chosen transmitter button.
7. The receiver will acknowledge by sounding the "click(s)" according to the relay number learnt, e.g. 3 clicks to show relay 3 has been learnt.
8. Press that same transmitter button again, to confirm OK. The receiver will "click" again to confirm.
9. This then completes learning for this relay.
The receiver will then move onto the next relay until either all relays have cycled through. Finally a shorter click will be heard to indicate that the learn cycle has been completed.
10. Wait 10 seconds for the unit to return to 'normal operation' mode.
11. The transmitter is now 'learnt' to the receiver unit and will operate the output relay(s) you have learnt.

Erasing Transmitter Encoders form Memory

1. Power the receiver unit up and wait 10 seconds for the unit to enter 'normal operation' mode.
2. Switch the unit off and then on again in ~1 second intervals **six** times finally leaving the unit powered.
3. Wait 5 seconds until a 'clicking' sound is heard for a period of 10 seconds.
4. Wait 10 seconds for the receiver unit to return to 'normal' mode
5. The unit has now erased all encoder data.

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