

PCR43301RE

1-Channel, 433MHz Penta Receiver with Frequency Hopping

Features

- Frequency hopping between 433.10 to 434.70MHz
- 12-way dipswitch or encrypted coding
- Compatible with PentaFOB® and PentaCODE® remotes
- Unlimited remotes can be programmed to the receiver
- Antenna diversity for robust link with extended range
- Wide operating supply voltage and low current consumption
- Momentary and latching modes are user selectable.
- On-board diagnostic LED's to indicate correct power, reception and relay activation



Applications

- Keyless access control for automatic gates and doors
- Home automation i.e. garden lights, swimming pool control etc.
- Security, lighting and automotive controls

.... and anywhere else you need a wireless signal to transmit a contact closure

Description

This receiver is compatible with “PentaFOB®” and “PentaCODE®” remotes. The receiver is so small that it can be easily installed into your existing automatic gate opener or garage door controls. Other applications include light control, security shutters or anywhere else you need a wireless signal to transmit a contact closure.

The PentaCODE® dual coding system gives the installer the option to use the classic 12-way dip switch coding or one of over 17 billion encrypted codes.

With the 12-way dip switch, just match the keyring remotes and the receiver's dip switch and it's coded. With the encrypted code you switch all the 12-way dip switches OFF and the remote and receiver automatically goes into the encrypted coding. Please see coding instructions for encrypted coding procedure.

Output Modes

Relay output on the receiver can function in either momentary or latching mode. By default the mode is set to momentary. To change it to latching a link needs to be cut.

Factory Default = Momentary

Momentary - Output is active for as long as the transmitter button is pressed.

This is a standard mode on most automatic gates or garage door openers.

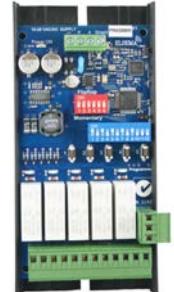
Latching - Output remains active until next press of the transmitter button.

Similar to switching "on" and "off" a light.

Customised Software

Custom output modes can be programmed to do special functions. Call Elsema for more details.

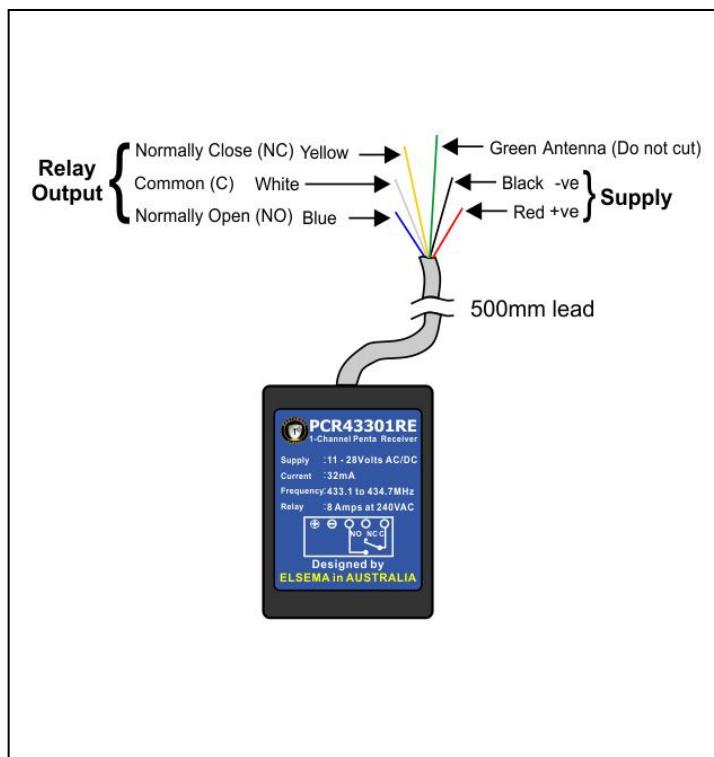
Products in the Range

			
PCR43301RE 1-Channel Receiver with Relay Output. Enclosed in a case	PCR43302P 2-Channel Plug in type Receiver with Open Collector Output	PCR43302R 2-Channel Receiver with Relay Outputs	PCR43302RE 2-Channel Receiver with Relay Outputs. Enclosed in a case
			
PCR43301240R 1-Channel Receiver with 240VAC mains supply	PCR43301240RE 1-Channel Receiver enclosed in an IP66 case	PCR43302240R 2-Channel Receiver with 240VAC mains supply	PCR43302240RE 2-Channel Receiver enclosed in an IP66 case
			
PCR43304R 4-Channel Receiver with Relay Outputs	PCR43304RE 4-Channel Receiver enclosed in an IP66 case	PCR43305R 5-Channel Receiver with Relay Outputs	PCR43305RE 5-Channel Receiver enclosed in an IP66 case

Technical Data

Supply Voltage	10.0 to 28.0 Volts AC or 11.0 to 36.0 Volts DC Can use Elsema's AC power pack PP12 or PP24
Standby Current	21mA stand by at 24VDC
Current Consumption	42mA with relay "On"
Frequencies	433.100 to 434.700MHz
Receiver Sensitivity	Better than 0.316uV (-117dBm)
Operating Temperature Range	-5 to 50°C
Receiver Memory Storage	Unlimited Remotes
Decoding System	Encrypted 17 billion codes combinations or On board 12-way code switch
Outputs	1 change over relay output, rated at 8 Amps 240VAC
Relay Contacts	Common (C) , Normally Closed (NC) & Normally Open (NO)
Connections	50cm Flying leads for supply and relay output. See block diagram
Antenna 1	ANT433 series for long range applications. Antenna wire for short range applications
Antenna 2	Use second antenna for extended range
Operating Range	Refer to the remote control or transmitter datasheet
Dimensions	70mm x 55mm x 25mm
Weight	70grams
Useable Transmitters	FOB433 series and PCK series

Block Diagram



PentaFOB® Programming Instructions

Coding the PentaFOB® remotes and receivers can be done in 2 different ways.

1. Using the Receiver
2. Using another Remote Control

Coding using the Receiver

1. Check that all switches are “OFF” on the receivers 12-way dip switch
2. Press and hold the program button on the receiver
3. Press the remote button for 2 seconds, receiver LED will flash and then turn Green
4. Release the button on the receiver and the remote
5. Press remote control button to test the receiver output

Coding using another Remote Control

1. Open the case of a remote control that is already programmed and press and release the program button on the back of the board
2. Press the new remote control button for 2 seconds
3. Press the new remote control button again to test the receiver output

Deleting Receivers Memory

Short the Code Reset pins on the receiver for 10 seconds. **This will delete all the remotes from the receiver's memory.**

PentaFOB® Programmer

This programmer allows you to add and delete certain remotes from the receiver memory. This is used when a remote control is lost or a tenant moves from the premises and the owner wants to prevent un-authorised access.

PentaFOB® Backup Chips

This chip is used to backup or restore the contents of a receiver. When there are 100's of remotes programmed to a receiver the installer normally backups the receiver memory in case the receiver is damaged.

PentaCODE Programming Instructions

12-Way Dip Switch Coding

1. Set a random code on the receiver dip switch by flicking the dip switches "On" or "Off".
(DO NOT USE THE DEFAULT FACTORY SETTING FOR THE 12-WAY DIP SWITCH AS THIS IS A COMMON CODE)
2. Open the battery cover in the PentaCODE® remote.
3. Match the 12-way dip switch to the receivers 12-way dip switch.
4. Press button 1 on the remote and the receiver output should activate. This is indicated by the receiver LED.

To program the same PentaCODE® remote buttons 2, 3 or 4 to another receiver change dip switch 11 and 12 in the 2nd, 3rd and 4th receivers. For example:

	Receivers Dip Switch 11	Receiver Dip Switch 12
Receiver 1	Off	Off
Receiver 2	On	Off
Receiver 3	Off	On
Receiver 4	On	On

Dip switches 1 to 10 should all be the same in the remotes and the receivers.

Encrypted Coding - (All 12-Way Dip Switches must be "Off")

Coding the PentaCODE® remotes and receivers can be done in 3 different ways.

3. Receiver to a Remote
4. Remote to a Receiver
5. Remote to a Remote

➤ Receiver to a Remote

1. Press and hold the program button 1 on the receiver.
2. Press the remote button you want to program for 2 seconds, receiver LED will flash Green
3. Release the button on the receiver and the remote.
4. The LED on the PentaCODE® remote will flash to confirm the coding has been successful.

➤ Remote to a Receiver / Remote to a Remote

Set one of the remotes or receivers to broadcast its code. The broadcaster's code will be programmed to the other units.

- To broadcast the remotes code make sure all 12 dip switches are "off". Then press and hold button 1 and flick dip switch 12 "on" and then "off". This is confirmed by the LED's being on for 10 seconds. You can release the remotes button 1.

- To broadcast the receivers code make sure all 12 dip switches are "off" and then flick dip switch 12 "on" and then "off". This is confirmed by the green LED being on for 10 seconds.

While broadcasting the code press button 1 on a different remote or receiver for 1 second and then release the button. The LED will flash twice to confirm successful programming.

Broadcasting will be latched on for 10 seconds or stop if any dipswitch is turned on.

Deleting Receivers Memory

Short the CC pin on the receiver for 10 seconds. **This will delete all the remotes from the receivers memory.**