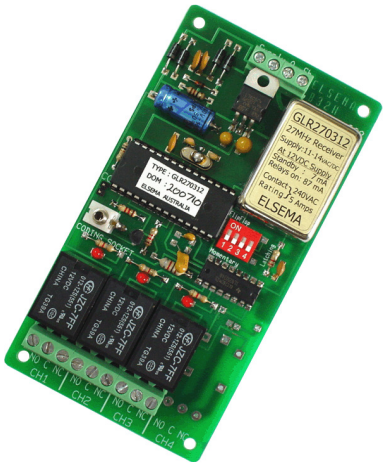
GLR270312, GLR270412, GLR270324, GLR270424

Multi-Channel 27MHz Gigalink™ Receiver

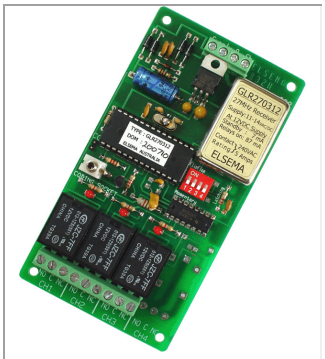
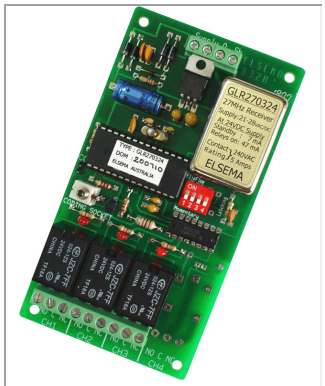
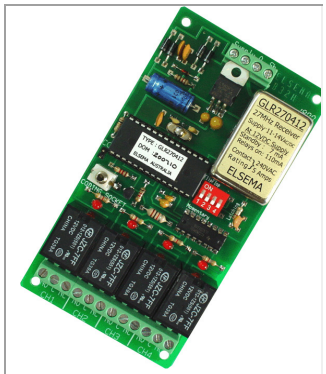
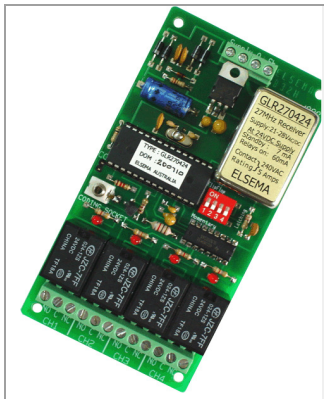


Features

- 3 or 4 Channels
- Wide supply connection – 11.0 to 28.0 Volts AC/DC
- Highly sensitive receiver input stage. When used with GLT27…. series transmitters and an ANT27L antenna, an operating range of 350 metres (980 ft) is possible.
- Three (GLR2703) or Four (GLR2704) relay outputs. Both outputs can be operated simultaneously.
- Crystal controlled for high stability and performance.
- Dual Conversion to reduce interference.
- Uses micro-controller technology that can be re-programmed to suit unique applications.
- Momentary, flip-flop and latching output modes is user selectable.
- Power ON LED indicator.
- Test buttons for relay.

Applications

- Automatic gates, security, timer controlled outputs and simple on/off functions etc

			
GLR270312 3-Channel 12V Relay	GLR270324 3-Channel 24V Relay	GLR270412 4-Channel 12V Relay	GLR270424 4-Channel 24V Relay

Description

The GIGALINK™ is an advanced Remote Control technology available in the world today. GIGALINK™ is an invention that has revolutionised the entire Remote Control technology including Elsema's earlier version of FMT- … and FMR- … series. The GLR.... series state-of-the-art invention brings a new dimension in the world of Remote Control technology in domestic, commercial and industrial applications.

The innovative microcontroller technology replaces the traditional dip switch coding which eliminates any possible code grabbing. Special features such as over four billion code combinations, ability to program any number of transmitters to any of the receiver outputs, three user selectable modes, dual conversion superhet and operational over a wide voltage range all adds up to the most advanced and secure Remote Control available.

Four billion codes
The user can easily change the code on all the channels. Momentary joining the two CC pins on the receiver board sets all channels to one random code. One of 4,294,967,296 possibilities is selected.

Code Programming
During single code programming, the 4-way dip switch selects the channel to be programmed. The table below shows the setting to select a different channel.

Dip Switch		Channel
1	2	Output Relay
OFF	OFF	1
ON	OFF	2
OFF	ON	3
ON	ON	4

After selecting the correct channel, the receiver channel is ready to be single code programmed.
Follow the steps outlined in the receivers instruction sheet titled single code programming to complete the code programming.

Code Programming - Channelised
If all the receiver channels are to be programmed onto a multi channel transmitter, then follow the steps outlined in the receivers instruction sheet titled channelised code programming. This does not require the user to set the 4-way dip switch since all receiver channels will be programmed sequentially onto the transmitters channels. The receiver power must be connected when single or channelised code programming. When programming is completed and the GIGALINK cable is removed from the multi channel receiver-coding socket, the 4-way dip switch is used to select different output modes. This is described below.

Four On-board **LEDs** to indicate which output is on

Different Modes for the Output
Modes are user selectable from the 4-way dipswitch. Dipswitch 1 corresponds to relay channel 1 and dipswitch 2 corresponds to relay channel 2 and so on.

Momentary Mode	If the dipswitch is “off” the relay will be in momentary mode.
Flipflop Mode	If the dipswitch is “on” the relay will be in flipflop mode.
Latching	If latching is required (Relay stays on until power is removed) the latching link should be inserted and soldered into the two holes to the right of the 4-way dipswitch. This Link will enable the corresponding relays to latch. E.g. When dip switch 1 is “on” relay 1 will be in latching mode. When dip switch 2 is “on” relay 2 will be in latching mode. And so on. If the dip switches are off the relays will be in momentary mode.

AC/DC Supply and Antenna

AC/DC power supply and antenna is connected via a screw-type terminal block. Do not connect the supply to the 2.5-mm coding socket since connection may damage the microcontroller.

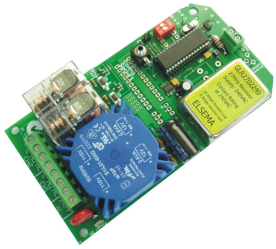
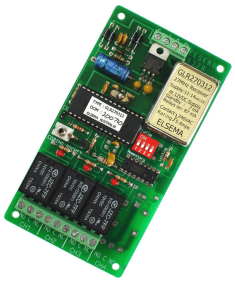
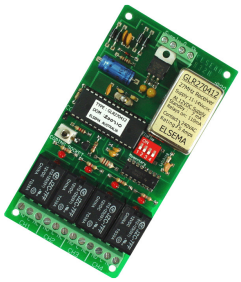
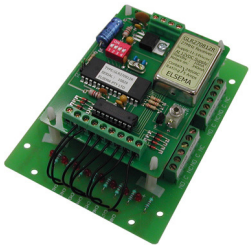
Unique Code System

The microcontroller EEPROM allows large volume users to have a unique code. This enables Elsema to offer everyone ”your own” radio control.

Case

The three or four-channel receiver is supplied without a case, this allows the receiver to be integrated according to your needs. Elsema has available a Quick Mount bracket which enables easy mounting to walls, roof etc.

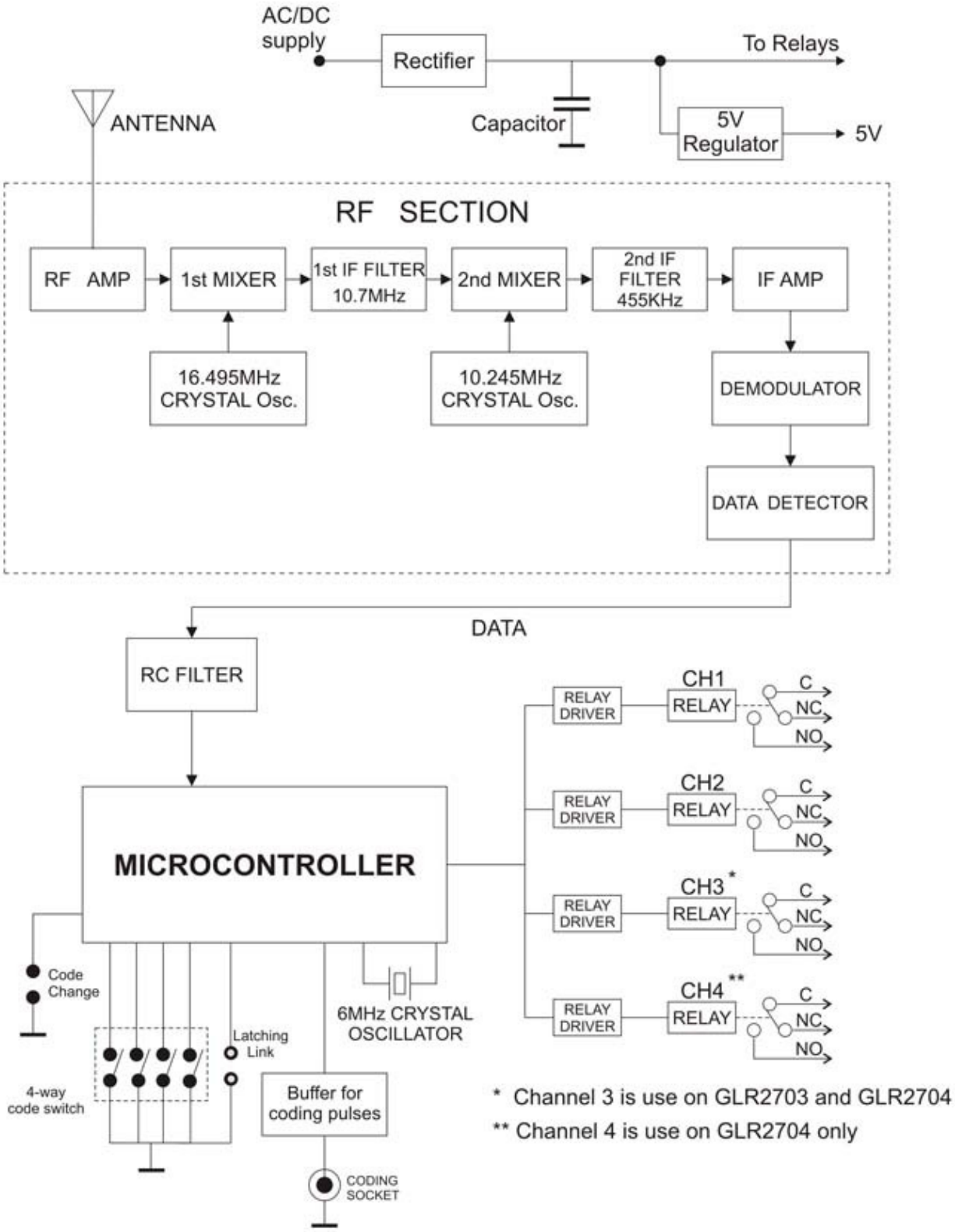
Products in the Range

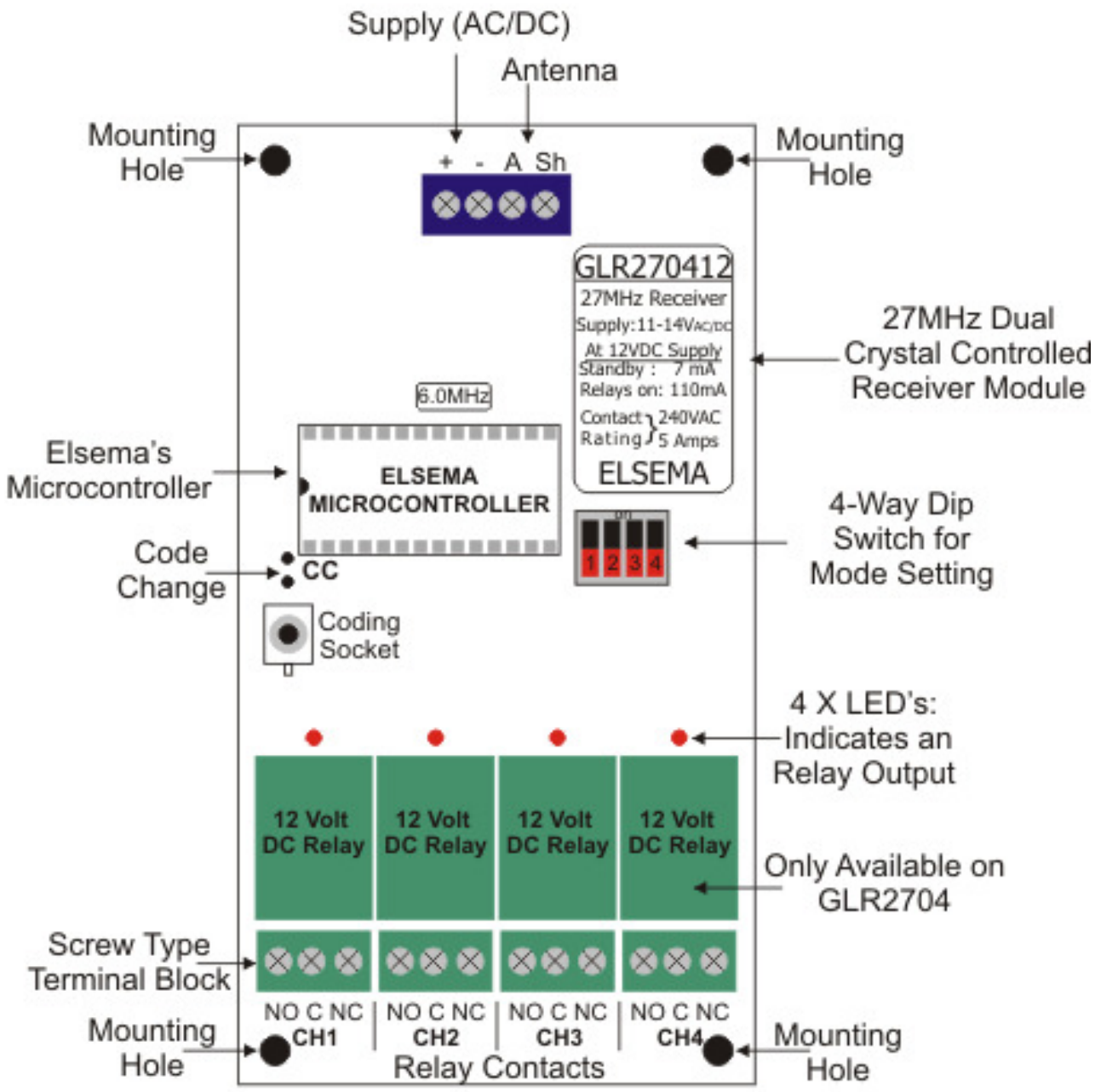
				
GLR2701 1-Channel	**GLR2701240** 1-Channel, 240V	**GLR2702** 2-Channel	**GLR2702240** 2-Channel, 240V	**GLR270312** **GLR270324** 3-Channel, 12 / 24V
				
GLR270412 **GLR270424** 4-Channel, 12 / 24V	**GLR2708** 8-Channel	**GLR270812** **GLR270824** 8-Channel, 12 / 24V Relay Output	**GLR2701SS** **GLR2702SS** 1,2 -Channel, Open Collector Output	

Technical Data

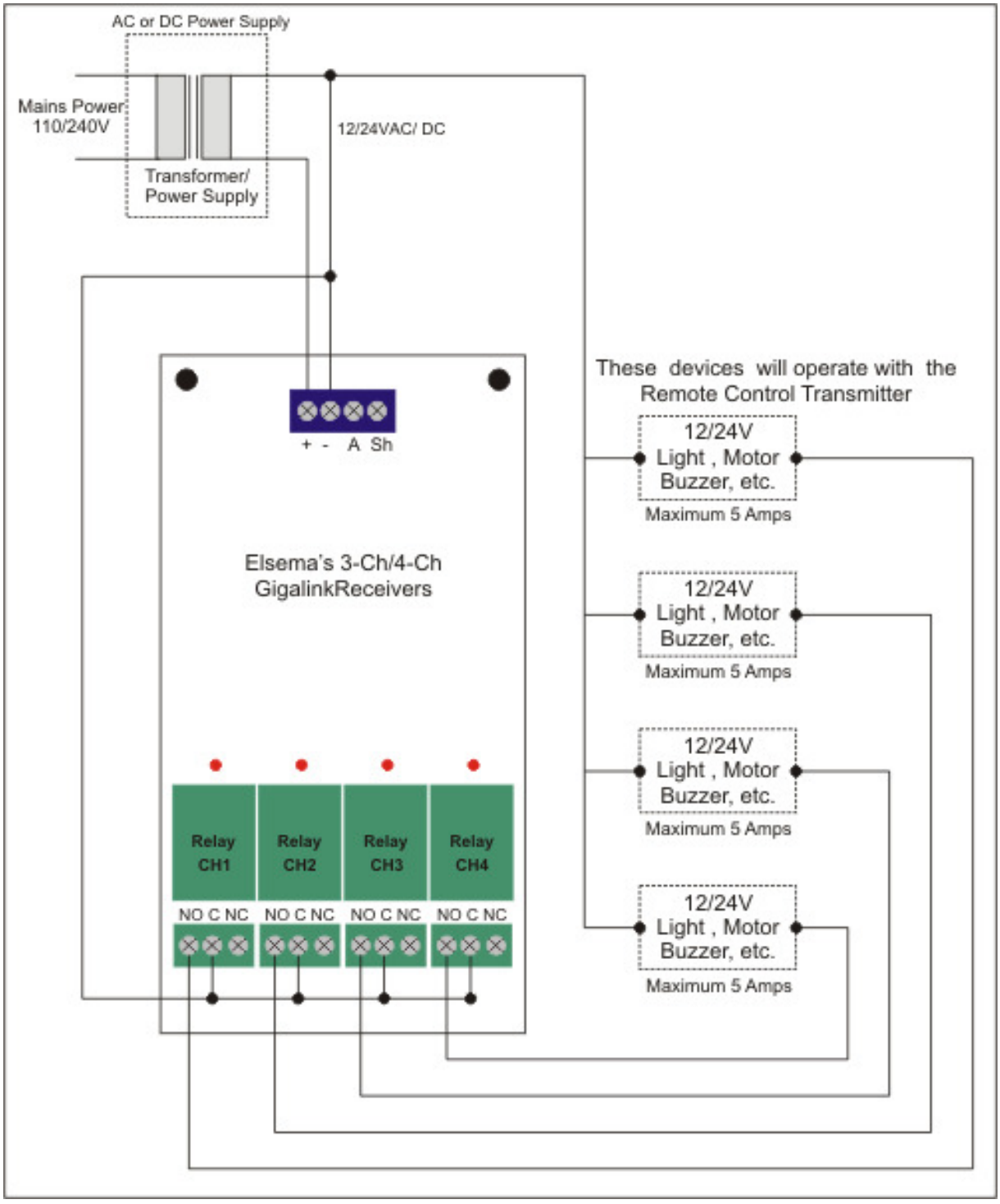
Supply Voltage	GLR2703/4-12 : 11.0 to 14.0 VAC/DC GLR2703/4-24 : 21.0 to 28.0 VAC/DC Can use Elsema AC power pack (PP12 or PP24) Supply lines should be less than 3 metres long to comply with radio frequency authorities.
Current Consumption	GLR2703/4-12:7mA standby at 12VDC, 110 mA if all relays "ON" at 12VDC GLR2703/4-24: 7mA standby at 24VDC, 60mA if all relays "ON" at 24VDC
Receiver Type	Dual Conversion Superheterodyne
Receiving Freq	27.195MHz (Other frequencies available: 27.045, 27.145 & 27.455MHz. NB. 27.455MHz is available for Europe Only)
Type of Crystal	10.245MHz, Fundamental, 20pf, 30ppm 16.495MHz, Fundamental, 20pf, 30ppm
Operating Temperature Range	-5 to 50°C
1st IF Freq	10.7MHz
2nd IF Freq	455kHz
Selectivity	-6dB at ±5kHz -20dB at ±6kHz
Sensitivity	1uV (for output to activate)
Image Rejection	At 26.285MHz better than -60dB
Type of Demodulation	Narrow-bandwidth Frequency Modulation (FM)
Occupied Bandwidth	±5kHz
Decoding System	Microcontroller based 96-bit word
Code Combinations	4,294,967,296
Outputs	Three / Four change over relay outputs, each rated at 8 Amps/240 Volts.
Connections	Supply, Antenna & Outputs: Screw type terminal block
Antenna	50 ohms, 27MHz CB-Antenna or approximately 1m long & 1mm thick piece of wire
Dimensions	130 x 70 x 20mm
Mounting hole size	3.97mm or 5/32"
Weight	127g
Microcontroller	Can be re-programmed to suit your customised needs
Useable Transmitters	All Elsema Type 27MHz GLT-... series
Useable operating range	Up to 350m with proper 50 ohms, 27MHz CB-Antenna. Up to 200m with 1m long antenna wire. Antenna wire should be extended and away from metal. Ranges assume line-of-sight operation.

Block Diagram

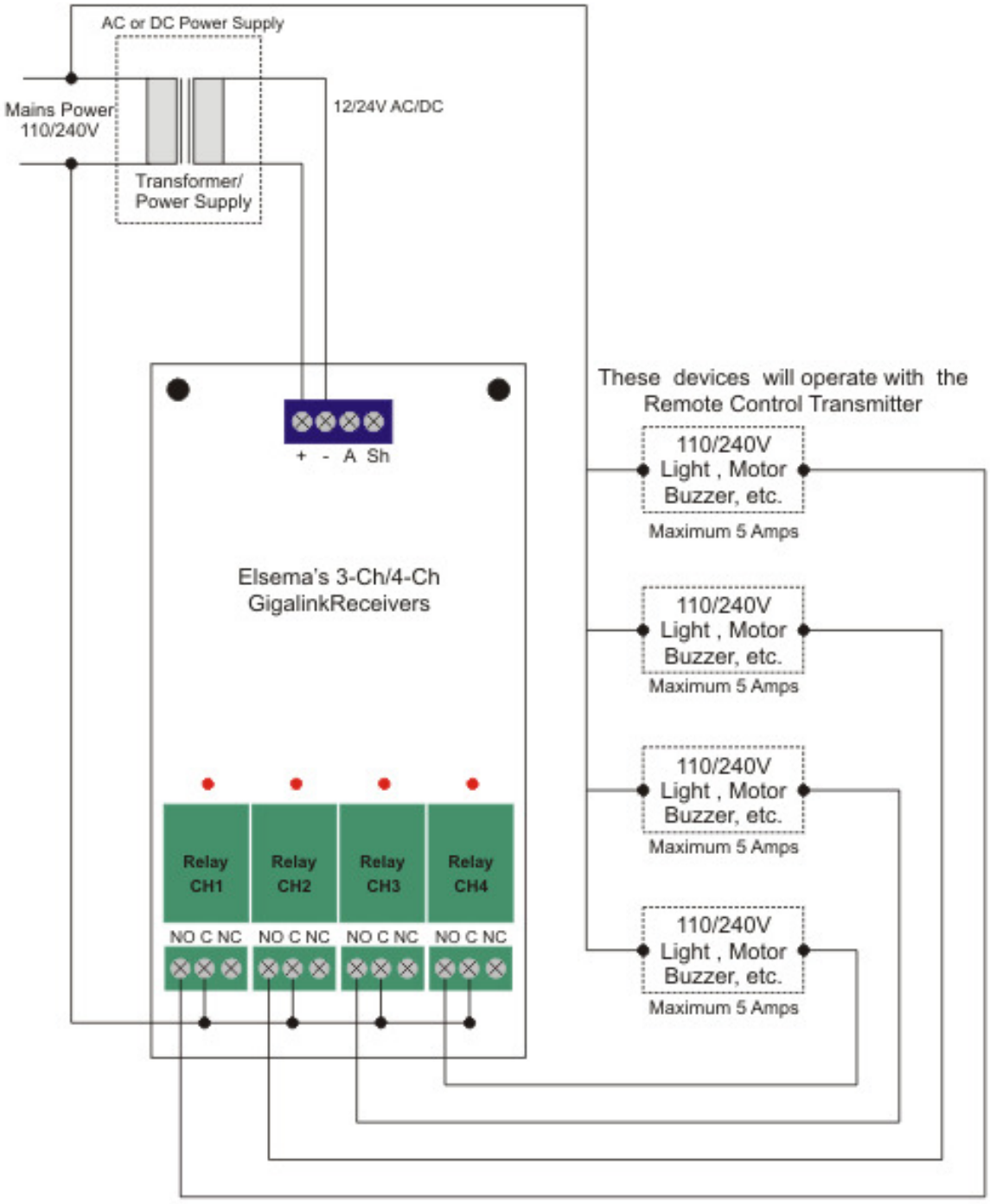



Supply (AC/DC)
Antenna
Mounting Hole
+ - A Sh
Mounting Hole
GLR270412
27MHz Receiver
Supply:11-14VAC/DC
At 12VDC Supply
Standby : 7 mA
Relays on: 110mA
Contact Rating 240VAC 5 Amps
ELSEMA
27MHz Dual Crystal Controlled Receiver Module
6.0MHz
Elsema's Microcontroller
ELSEMA MICROCONTROLLER
Code Change
CC
1 2 3 4
4-Way Dip Switch for Mode Setting
Coding Socket
4 X LED's: Indicates an Relay Output
12 Volt DC Relay
12 Volt DC Relay
12 Volt DC Relay
12 Volt DC Relay
Only Available on GLR2704
Screw Type Terminal Block
NO C NC CH1
NO C NC CH2
NO C NC CH3
NO C NC CH4
Relay Contacts
Mounting Hole
Mounting Hole

GLR2703/4 12/24 VDC Application



GLR2703/4 110/240 VAC Application



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